45635

POPULAR COMMUNICATIONS

MARCH 2002

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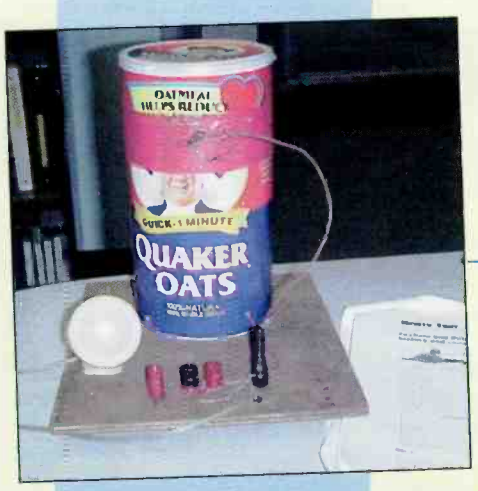

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Departments

On The Cover

An Air Force crew member "tweaks" the signal during broadcast on a recent training mission aboard an EC-130 "Commando Solo II" aircraft. The Commando Solo is flown by the 193rd Special Operations Wing, Pennsylvania Air National Guard. Frequencies and details are on page 38. Photo by Master Sgt. David Hawkins, USAF.

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tuning in

by Harold Ort, N2RLL, SSB-596

an editorial

Half-Baked Ham

One of the interesting things about our government is that you never know just what they'll do next. Yes, they work *for us* — on paper at least, but for the most part I've come to believe that although human beings work "there," the "there" allows "them" to take on some strange, out-of-step-with-reality form that neither your nor I can recognize, except when they issue an edict or respond to a rational, well-thought-out request from those they serve. Strange, isn't it that we've come so far with technology, yet when it comes to the people aspect and decision-making in the 21st Century, in many ways we're still swinging from tree branches.

So, I wasn't terribly surprised the other day when, once again, my official Washington BS Meter went off scale. Many of you will remember years ago when the FCC officially designated CB Channel 9 as the "official" emergency channel. Sure, they did a dumb thing by putting a "citizen's" radio band in an area of the radio spectrum that supports worldwide communication and then in the same breath made it illegal to talk "skip," but that aside, their hearts and bureaucratic brains were in the right place by finally making Channel 9 the official emergency channel. During its heyday, thousands of calls were taken and countless lives were saved because of the selfless efforts of unpaid volunteers handling calls for assistance (and yet, amazingly the FCC recently refused to relinquish the 155-mile communications limit on CB when it comes to working emergency calls — RM-9807 — essentially thumbing its nose at today's CB radio volunteers) on the nationwide emergency channel.

FRS To The Rescue

The number of Americans using those little Family Service (FRS) radios to stay in touch around the home, at the mall or on vacation has skyrocketed in the past couple of years. They're so popular — and inexpensive — that many families are buying one for each of the kids; they offer crystal clear communication up to a mile or so, it's license-free, and they're small enough to fit in a shirt pocket or purse. Many even offer a selective calling feature, and alert tones that can be programmed to "ring" when another user in your group wants to talk with you. All in all, they're pretty nifty stay-in-touch gizmos in our very wireless world.

There's currently no provision for selecting or informing people about using one *of* the 14 VHF FRS channels for the calling/emergency channel. While it's certainly true that the original concept of FRS was a short-range communications tool for families and friends to stay in touch, there have been numerous instances where these little half-watt marvels have indeed saved lives. In some cases it has, frankly, been sheer luck that the call was heard — not because of the low power of the FRS unit, but because other radio users just happened on the channel the person calling for help was using. Recall for a moment, the citizen's radio service where the famous Channel 9 exists, not just on paper, but on many radios as well. Push a button or flip a switch, and you're instantly at the emergency channel, where on any given day your chances of getting help are a whole lot better than picking another CB channel number out of a hat and calling for help. It's common sense that monitors should know where to look for emergency calls.

When Alan Dixon and Bob Leef petitioned the FCC (RM-10019) back in 2000 to establish FRS Channel 1 as the official emergency calling channel I really thought the FCC would look at it as an opportunity to do the right thing — the common sense thing. Key words: common sense. But, once again I was wrong.

Some days I really believe there are people serving us in Washington (and even locally in government for that matter) that aren't drinking the same water we're drinking. You know what I mean? You and I sit down with our families and talk about our day and helping others, fixing problems and working toward some common goal. Then there's the "other world," unseen by us regular folks, where they're quite possibly still eating their baked beans and Lucky Charms with their fingers. (I saw it firsthand in the Army — frequently at the field-grade officer level — that scary look that tells *sane* humans there's a DNA problem somewhere. You're honest, sincere, you

(Continued on page 78)j2

POPULAR COMMUNICATIONS

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CQ Communications, Inc.
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Offices: 25 Newbridge Road, Hicksville, NY 11801. Telephone (516) 681-2922. FAX (516) 681-2926. Web Site:<http://www.popular-communications.com/> Popular Communications (ISSN-0733-3315) is published monthly by CQ Communications, Inc. Periodical class postage paid at Hicksville, NY and additional offices. Subscription prices (payable in U.S. dollars): Domestic—one year $28.95, two years $51.95, three years $74.95. Canada/Mexico—one year $38.95, two years $71.95, three years $104.95. Foreign Air Post—one year $48.95, two years $91.95, three years $134.95.

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our readers speak out

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 <popular-com@aol.com>.

BBC Quits SWBC

Dear Editor:

I have been DXing since I was a kid in 1958. Thirty years ago I found myself working in the field of computers. More recently the president of the Santa Barbara Amateur Radio club encouraged me to earn my Tech-Ticket. Since that time, as *QST* is a pretty good read, I have not been reading *Pop'Comm*. However, my Sony ICF-7600 is failing. It is the second in that series that I have owned, and is now the second to fail. The "quality" of the caps seems to be sub-par.

Now I am in the market for a new shortwave portable, and decided to pick up a copy of *Pop'Comm*. I read your editorial about the demise of North American broadcasting by the BBC. I feel that you missed "the story behind the story." During the Sydney Olympics, those expecting to use their BBC Internet connection to listen to the games were in for a rude surprise. The BBC temporarily suspended Internet simulcasts during the games. It was simple enough to hear immediate BBC reports of the games over the shortwave, but the BBC obviously did not want to steal the thunder from NBC, which was offering only a time-shifted delayed rebroadcast of the games.

I feel that the BBC's real reason for suspending shortwave broadcasting is that with shortwave they cannot precisely control which region of the globe is receiving their broadcast. Just as practically all broadcasting in the United States is now controlled by the three corporations who gave us George Bush, the major nationalistic broadcasters are attempting to precisely control the flow of information throughout the globe. Someone said, "Information is power."

The digital shortwave broadcasting proposals that the major broadcasters and Thompson are pushing at the next ITU conference are motivated by the same objectives. Minimize the effectiveness of the medium to small broadcasters until they leave the bands and the corporations can eat everyone's lunch.

Many years ago I met a fellow, the foremost psychologist from Brazil. A self-proclaimed socialist, he, rather irritated, made the point that the United States often refers to itself as "America." He felt that it was bourgeoisie of the United States to claim the moniker "America" because as far as he was concerned, Brazil is America.

Similarly in "The Wireless Connection" column Peter Bertini refers to "our American Servicemen." Does he mean members of the Brazilian Army? Perhaps Uruguay? I am being facetious to make a point. In the interest of presenting factual information in *Pop'Comm* you might want to make this distinction in the future.

The debacle with the berets and the blurring of our national sovereignty will soon have us accommodating UN/NATO troops on our United States' territory. Taking the revolution in Iran as an example, the Shah was firmly in control until the individuals in his Army found themselves, on too many occasions, firing on their own kin. Finally they deserted the Shah in favor of their brethren.

If we find UN/NATO troops from China or Pakistan on our territory the possibility of such desertion of the corporations is minimized.

Concerning your article "How to Say No to Blackouts," great idea. If I were building one of these I would spend a few dollars more for one of the Optima spiral-wound batteries. They are well worth the added expense, especially for such a vital piece of equipment. Thanks for the consistently fine publication.

Keith

Dear Keith,

I'm writing to you from the deck of my very small, slow boat enroute to see my psychologist in Peru. Wish me luck, please, because I'm confused, and very concerned about Bertini.

As Long As Bill Price Doesn't Get One!

Dear Editor:

In the July 2001 edition of *Pop'Comm*, a correspondent asks about devices that change the traffic signal light from red to green on approach, to which you responded, "And you'd want one for??"

There are such devices available. All of them are only available to local governments, or emergency agencies. (I wish they'd do it here in New York City, where I work for the EMS Command of the FDNY!) I personally know of several municipal and volunteer fire department houses, as well as some volunteer ambulance services, have a switch to manually override the traffic light outside their door, turning all other directions red, to allow them to safely exit the apparatus bays while on emergency responses, and for backing in again at the call's end. There are also devices that are attached to the traffic lights on a town or countywide basis that, on receiving an infrared light beam from the emergency vehicle, will turn all directions, except the one the emergency vehicle is coming from, red.

Other devices do the same for the sound of the siren, as the municipality's government knows some emergency vehicles may only be passing through from another city or county.

As for the rest of us, including us emergency workers in our private vehicles, let us keep watching the new car commercials, and dreaming.

Richard C. Berger,
Registered Monitor/SWL Station KNY2SC,
NY State Emergency Medical Technician, Belle Harbor, NY

Dear Richard,

Thank you for your letter — and to the many other folks who responded on this topic. Given today's society and general craziness, I hope the checks and balances to obtain such devices are better than the checks and balances I'm seeing at our nation's airports and borders.

I also think it's a great idea to have an emergency receiver built into every new vehicle that gives an audible and lighted warning when an on-call emergency vehicle is approaching. Make these devices disable-proof and it could save lives.

Your hard work as an EMT is sincerely appreciated by all of us, Richard.

Enough, Already!

Dear Editor:

I read *Popular Communications* — March 2001 issue. The article "Broadcasting from Vietnam — A New Millennium" was quite interesting. I have a question that doesn't really pertain to this article, but it's one that I believe I read in *Fortean Times* magazine. There was a report that someone with a ham radio in 1986 picked up a radio frequency that was originally sent out from a Navy ship during World War II. Is it possible that radio waves could possibly bounce back and forth in the atmosphere for these many years and finally someone from the future is able to hear it? This story reminded me of the movie "Frequency."

Sincerely yours,
Joseph Anthony Soyo
Walnut Creek, CA 94004

Dear Joseph,

If it's true, I hope they have the good sense to turn off the radio before hearing Howard Stern for more than 30 seconds.

Use It Or Lose It Department

Dear Editor:

I have been reading with some interest the debate around the REACT and CB channel 9 monitoring thing. This very interesting in regard to the fact that, until being disbanded in 1995, the Ontario Provincial Government Ministry of Transportation, and The Ontario Provincial Police had their own form of REACT. This was called 'The Emergency Patrol." These people not only responded to roadside assistance calls, but were also trained in the handling of many other emergency situations as well, including major accidents, and toxic spills. I know this because I was one of them.

Unfortunately, after almost 30 years of service, it was discontinued in 1995 leaving the general public in a tight spot and depending on some, not all, crooked tow truck drivers for any help. When I went over to the local detachment of the Provincial Police and told the staff sergeant that we would no longer be around and why, the man nearly had a stroke. He said "I don't have the manpower to pick up the slack from you guys, what are we gonna do now?" And to quote the (then) Minister of Transportation, Mr. Al Paladini, "Emergency Patrol? What do we need those guys for? Everyone has a cell phone these days ya know."

This reminds me of some of the letters that I have read in your magazine. You know what they say: If you don't use it, some government fool will make you lose it. And if you happen to be driving up this way, be sure that you car/RV/pick-up

(Continued on page 76)

An EC-130E aircraft like that used by the USA to broadcast to the Afghans.

Voices From Afghanistan

The World Waits, Listens And Chases bin Laden

by Harold Ort, N2RLL, Editor

As this is written, the air war over Afghanistan continues to pound Kabul, Tora Bora, and bin Laden's followers hunkering down in their mountain caves. As Afghanistan's tug of war between various political factions most certainly rages on, despite what our media tells us to the contrary, the country remains in a state of turmoil. There's no central government to speak of, and with troops — if we wish to call them that — loyal to bin Laden now scattered across hundreds of miles of formidable terrain, anything can, and will happen as the dust settles.

The Afghan people, caught in the middle of the decades-old struggle, were largely without information, entertainment, personal freedoms, and rights we take for granted. A month after the attacks on the World Trade Center and Pentagon, the **Voice of Shari'ah** in Kabul **(on variable 7085/7087 kHz)** was eliminated by allied missiles. Even the Northern Alliance's **Takhar Radio (variable from 7005 to 7087 kHz)** hasn't been heard since the end of September. Later, in mid-November, in Mazar-e-Sharif, the Taliban-controlled radio station was overtaken by Northern Alliance forces and aired music — even with woman announcers — for the first time in years. The station is still there broadcasting in Dari, Pashto, Turkmen, and Uzbek on 1584 kHz, a station you certainly won't hear unless you're in the neighborhood.

Commando Solo Broadcasts

Six EC-130E aircraft of the Pennsylvania National Guard have been broadcasting to the Afghan people — and former bin Laden followers — on several mediumwave frequencies, inaudible in North America. However, on **8700 kHz USB** from 0030 to 0530 and 1230 to 1730, "Information Radio," also a U.S. psyops effort, broadcasts information and music to Afghanistan in the Pashto and Dari languages we *can* hear!

The purpose is to help reassure the Afghan people about the allied mission and inform them of humanitarian airdrops. At this writing, the National Guard, repsonsible for these broadcats, wasn't interested in receiving reception reports, but should they decide to do so in the near future, their address is: Pennsylvanua Air National Guard Headquarters, 193rd Special Operations Wing, Attn: Lt. Edward Shank, 81 Constellation Court, Middletown, PA 17057-5086.

Other Afghan Voices

There are numerous other radio "voices" emanating from Afghanistan, most of which can't be heard in North America. They include Radio Heart, Radio Sol, Radio Nangarhar, Radio Voice of Mujahid (CIA and Russian supported) in opposition to the Taliban, and the Voice of Shari'a of Balkh Province. These stations, either on FM or mediumwave, typically have limited broadcast schedules and clearly have only local/regional coverage, at best.

Big Plans?

As this is written, a bill introduced in the U.S. Senate by Senator Joseph Biden and Jesse Helms, S. 1779 would provide

$8 for a "Radio Free Afghanistan" and another $9 million for capital improvements of the facility. It would broadcast news in the Pashto and Dari languages for the people of this war-torn country. We'll keep you posted on this intriguing development as details become available.

Radio Afghanistan From Kabul

From Kabul, Radio Afghanistan, once under Taliban control is now little more than a small station, but with woman announcers working alongside male announcers who worked there when the station was run by the Taliban. It seems only a matter of time before this station in the Afghan capital, becomes the official "voice" run by whatever government ends up running the show.

Radio Afghanistan is on 1530 kHz mediumwave and an FM frequency, both inaudible in the USA. It remains to be seen if the station eventually opens a shortwave facility as the official voice of the supposed soon-to-be new Afghan government.

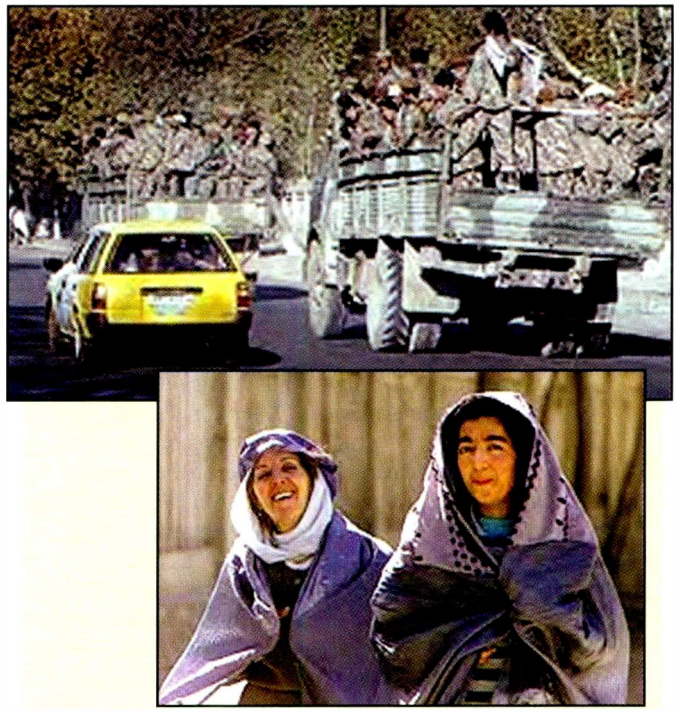
The Voice Of Afghanistan

If this all sounds confusing, imagine yourself in a largely devastated country surrounded by voices of every imaginable faction all jockeying for position on the radio dial. With that picture in mind, enter The **Voice Of Afghanistan**, owned by one Mr. Jalal Karim, an Afghan-born businessman. I recently spoke with Mr. Karim who said there are "plans to expand the station in the near future" from the current one-hour broadcast from 1330–1430 on **9950 kHz**, to two hours, 1230–1430. Karim's plan called for going to one hour in each language at one point in January, and eventually to a total of four or more hours a day in the Pashto and Farsi languages.

With a current staff of eight, from broadcasting studios based in London, he said, "We're trying to give a voice to the Afghans — to whatever political agenda they have. We want freedom of the press and a platform for all Afghans to get their message out to Afghanistan and the world." To that end there are talkshows featuring women, businessmen, political figures (from all sides, he noted) including live and taped reports from a reporter on the ground in both Afghanistan and Pakistan. Can you hear the station? You bet — with a **500 kW transmitter** he initially said was "between Asia and Europe" and later confirmed to be in **Samara, Russia**, it's a signal that has global reach, and reaches the Afghans with even a modest portable shortwave receiver.

The audience, according to Karim, is primarily Afghanistan, Iran, Turkey, and the Middle East. He also said the station will be on the Internet within "a couple of weeks" at afghanbroadcasting.net.

The official station news release stated, " . . . has established a charitable foundation which runs schools and orphanages in both Saudi Arabia and Afghanistan. His aim is to provide a positive, all-inclusive, platform for news, views, and comment on Afghanistan thereby contributing to the re-building of the nation and its rehabilitation internationally. The Said Jalal Foundation funds the operation of the new radio station through a non-profit making organization, the Afghan Broadcasting Company.



Via that powerful shortwave transmitter, the Voice of Afghanistan reaches its Afghan listeners on **9950 kHz** each evening between 6 p.m. and 7 p.m. local time. Speaking of the inauguration of the Voice of Afghanistan, the founder, Said Jalal Karim, said, "A radio station seeking consensus and unity in the process of rebuilding Afghanistan is badly needed and the Voice of Afghanistan will fill that role. The radio station will be the voice of the people — all of the people. The Said Jalal Foundation is very proud to be supporting this important radio station."

Clearly not a commercial, or government-owned station, Karim is looking for sponsors to get the "Voice" out to the masses. He also told me the station will QSL correct reception reports sent either to his staff by E-mail at afbc9950@hotmail.com or by mail to the Voice of Afghanistan, 21 Worship, London EC2A 2DW, UK. Check our upcoming issues of *Popular Communications* for more details as this station expands its schedule in the coming months.

Pakistan Talks To The World

As Pakistani officials brace for an onslaught of fleeing bin Laden loyalists trying to enter their country, listen for the official Pakistani take on the situation from **Radio Pakistan** (Broadcasting House, Constitution Avenue, Islamabad 4400, Pakistan) scheduled in English at 0045–0115 on **11650 and 15455**; 1600–1615 on **11570 and 15100**; **15725 and 17725 kHz**. Other languages and times vary from early morning until late evenings on **7375, 9330, 9400, 15625, 17665, 17825,** and many more. Be sure to keep watching Gerry Dexter's Global Information Guide for the latest schedule and listener reports on both Afghanistan and Pakistan during these difficult, uncertain times. ■

Snaring The Sidebanders

There Are Still Plenty Of International Shortwave Stations On Sideband You Can Hear – Here's How!

by Gerry Dexter

"This is a test for circuit adjustment purposes from a station of the American Telephone and Telegraph Company . . . " That used to be a commonly heard announcement on shortwave and was one of the easiest ways you could hear a single sideband transmission. Not only AT&T but also their equivalent Post Telephone-Telegraph companies (PTT) around the world all ran similar "tests" as a way of keeping their frequencies clear and ready for use when needed. But over the years nearly all of the kind of traffic handled by these stations has moved to satellites. Not only do the frequencies no longer need to be kept ready, but most of these stations are long gone from the airwaves. There are still many sideband transmissions on shortwave, however - from utility stations of every description and purpose. Everything from VOLMET weather reports to the communications from bomber crews going after the Taliban in Afghanistan. And, lest we forget, sideband has also been a favorite of amateur radio operators for several decades now.

Before satellites came into such widespread use major international broadcasters such as the VOA, RFE/RL, BBC, Radio Moscow and others used sideband transmission to "feed" their programs to their relay sites; hence their name: feeders. There were a couple of places on the dial where your could find the VOA with one program running on lower sideband and, simultaneously, a different program on upper sideband

For a while a decade or more ago, sideband broadcasting almost reached fad status among some shortwave broadcasters. Shortwave futurists thought it would help cure the interference problem, allow more stations to operate on more frequencies with lower power and thus lower cost. Back in 1978 Sweden even ran some test broadcasts, but the results didn't convince Radio Sweden to air broadcasts in sideband mode.

A decade later, the University of the South Pacific in the Fiji Islands used a 150 watt transmitter to broadcast "extension" courses to its satellite centers on other islands. Many North American monitors caught these signals on 12140. Unfortunately, the service was discontinued a few years ago.

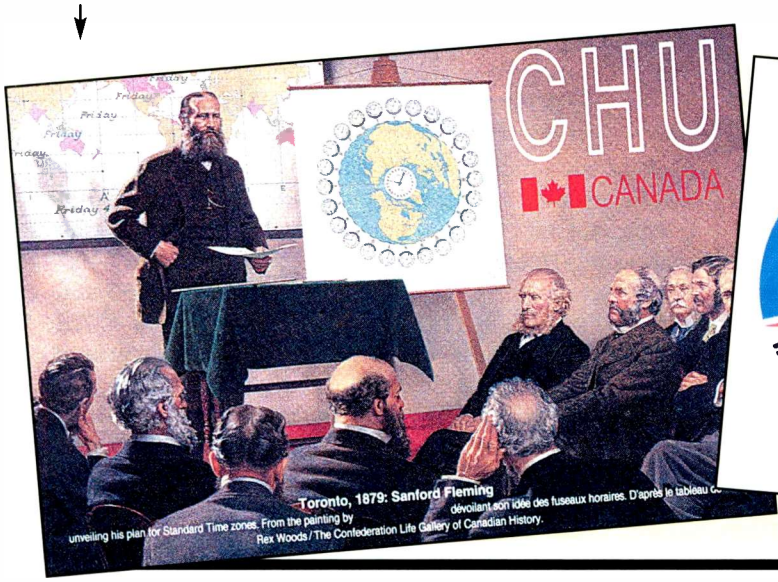
Sideband's chance at making the broadcaster's toolbox seems to have passed before all the great portables with SSB capability came along. The then correct argument that "nobody can hear these things" no longer applies!

Even so, a few broadcasters *are* using the sideband mode on shortwave. And those, coupled with some **pirates** who, probably due to the ham equipment they use, have always tended towards sideband) plus a few outlets which operate more or less as feeders that are at least sort of aimed at a general audience, add up to a sufficient number of targets to at least get our attention!

So here's our list of shortwave stations that broadcast using the single sideband mode. Most transmissions are in upper sideband (USB) so you can assume that is the case when we do not specify otherwise. See how many of these you can snare!

AFGHANISTAN – The most recent entry into the sideband ranks is the U.S. Army's "Psyops" station – "Information Radio," which is operating nightly in the Pashtu and Dari languages on **8700 USB** from 0030 sign-on. Hearing it is a rough and tumble proposition, but it's certainly not impossible, despite what sounds like several layers of QRM, some of which may be jamming. The overseers of this special effort do not want to be bothered with reception reports while the operation is still on. But take a log if you can, and then hold on until the all clear sounds!

CHU-Canada's time signals are sent in SSB on 3.330, 7335 and 14670.



Part of Radio Havana Cuba's 9830 usage is in sideband.

ARGENTINA – For many years Argentina's "utility" transmitter at Gral Pacheco has been carrying a variety of local AM – and sometimes FM – broadcasters, mostly out of Buenos Aires, at various hours. If there is a specific schedule for what airs when- and where - we haven't seen it. All of the following have been relayed at one time or another over the past couple of years: Radio Continental, Radio Rivadavia, La Red, Radio Corsario, Radio Diez , Luz del Mundo, Radio Malargue and Radio Mitre. The frequencies most often used are **8098, 15820, 20276** – sometimes even **29810** near the end of the shortwave segment of the spectrum. DX'ers have managed to QSL many of these so the stations seem to know the relays exist. It's believed these broadcasts are intended for Argentine military and other personnel living outside the country.

There are also a couple of occasionally active Argentine pirate stations. Radio Cochiquaz, operates on **11440** from 2000-2300 and 0000-0900, although not necessarily regularly. This station relays programs from European pirate broadcasters and rarely, if ever, seems to put anything of its own on the air. We haven't been able to trace an address on this one so far.

Another is Radio Bosques, recently moved to **12109** (probably 12110, nominally).

The address for this one is: Sr. Allejandro Garcia, Magdalena No. 34, 1874 Villa Dominico Unico (U), Argentina. There's no set schedule.

CANADA – An easy one is Canada's official time and frequency station, CHU in Ottawa, which operates in upper sideband mode 24 hours a day on **3330, 7335 and 14670. 7335** runs 10 kW, the other two outlets use just 3 KW. This one sends a nice QSL card. Address: Time and Frequency Standards, Building M-36, National Research Council, Ottawa, ON K1A OR6

CHILE – Another occasionally active South American pirate is the Andina Relay Service, which uses **6880** LSB now and then during the 0300 to 0600 period.

COSTA RICA – Radio For Peace International can be heard in upper sideband mode on **21815** from 1200 to 0200 using 2 kilowatts. Address: Apartado 88, Santa Ana, Costa Rica. The transmitters are located in Ciudad Colon.

CUBA – Radio Havana Cuba used to be more sideband-active than it is currently. The regression may be due to the difficulties involved in just keeping RHC on the air, not to mention all the spare parts those jamming efforts must demand. They're in USB on **9830** from 0500 to 0700 with English to Europe and North America. Address: Radio Havana Cuba, P.O. Box 6240, Havana, Cuba.

ECUADOR – HCJB has long had a more or less experimental sideband transmitter operating on **21455**, and it's been quite well heard throughout its existence. Originally it was running very low power, but it may have been increased up to as much as 15 kilowatts now. 21455 is in use from 2000 to 1530. Address: HCJB, Casilla 17-17-691, Quito, Ecuador.

RFPI's 21815 broadcast use upper sideband mode.

HONDURAS – Relatively new, Radio Misiones Internacional – HRMI, uses sideband for their broadcasts on **5010**, which run from 1800 to 0430 in USB. The station seems best heard around 0400. It often suffers from a het (there are two or three other Latin broadcasters within a kilohertz or two). This religious broadcaster is operated by IMF World Missions of San Bernadino, California. You can write to them there (at P.O. Box 6321, zip 92412) or to: Apartado Postal 30583, Comayaguela, M.D.C., Honduras. The station itself is in Tegucigalpa. The schedule includes some English language religious broadcasts, notably the last segment before sign-off.

ICELAND – The Icelandic National Broadcasting Service (Rikisutvarpid) airs transmissions for members of Iceland's fishing fleet operating in waters near Europe and North America. Oddly, the major references no longer show these as using sideband, although listeners find that to be the case. The broadcasts are easily heard in North America and the station readily QSLs. Transmissions are on the air from 1200-1300 on 13805, 1410 to 1440 on 13860 and 1755 to 1830 on 11402 – all to Europe. They're directed to the North American area from 1835 to 1905 on 13860 and 2300 to 2335 on 11402. This last one is probably easiest to hear. Reception reports go to: Rikisutvarpid, International Relations Dept., Efstaleiti 1, IS-150, Reykjavik, Iceland.

ISRAEL – The Israeli Defense Forces station, Galei Zahal, uses a 10 kW USB transmitter on **6973** for its Hebrew broadcasts 24 hours per day. It can be easily heard throughout North America. An "**alternate**" frequency, **15786**, seems to be in straight ahead AM mode. Address: Military Mail No. 01005, Israel. (Yes, that's all there is to it)

ITALY – Radio Europe, a small private broadcaster operates on **7306** from 0800 to 1600 with just 500 watts. This one definitely fits into the "No way I'll ever hear that!" category. Address: P.O. Box 12, 20090 Limito de Pioltello, Milan, Italy.

JAPAN – NHK has several low-power USB feeders, which are occasionally active. Not only can't you count on them being on the air, their frequencies and low power put them into the impossible category for all but those on the extreme west coast (and then you almost need to toss one end of the antenna into the Pacific). When/if they're active check:

NHK – Fukouka uses **3259** from 0800 to 1300, **6130** from 2000-0400, and **9535** from 0430 to 0730. Address: 1-1-10 Ropponmatsu, Chou-ku, Fukuoka-shi, Fukuoka 810-77.

NHK Osaka operates on **3373.5** from 0800 – 1300. Also **5428** from 2000-0300 and 0500-0730 and **9181** from 0330 to 0415. Address: 3-43 Bamba-cho, Chou-ku, Osaka 540-01.

NHK Tokyo-Shobu uses **3607.5** from 0800-1300, **6175** at 2000-0030 and **9550** from 0100-0730. 3047-1 Oaza-Sanga, Shobo-chu, Minamisaitama-gun, Saitama 346-0104

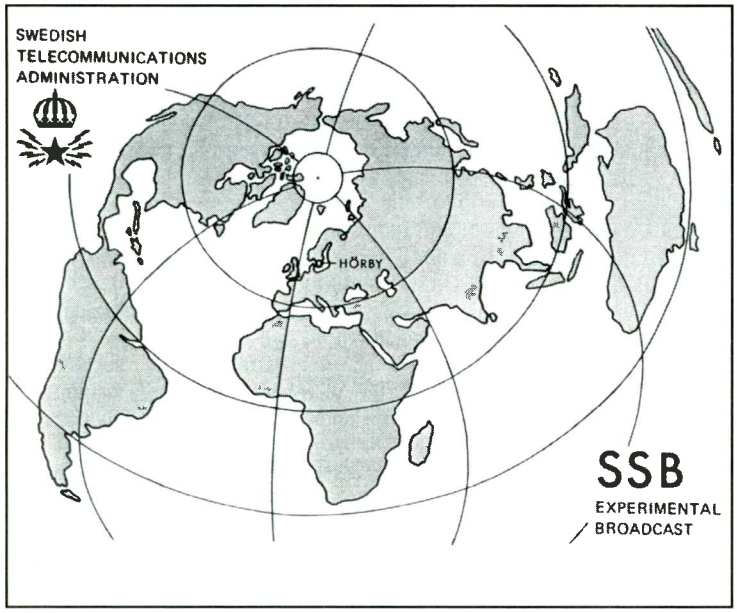
NHK Nagoya is assigned **3970** from 0400-1300 and **6005** from 0100-0330. The address is 13-3 Higashisakura 1-chome, Higashi-ku, Nagoya 461-8710.

NHK Sapporo uses **6005** from 0400-1330 and **9535** from 0100-0430. Address: 1-1 Odora Nishi, Chou-ku, Sapporo 660-8703.

KIRIBATI – Although Radio Kiribati is currently silent, everybody has their fingers crossed in hopes that this neat little station will rejoin the shortwave world one of these days. Certainly it's worth keeping an ear on their **9810** frequency. When active they operate with one kilowatt from 0500 to 1100. Instead of 9810 they've sometimes preferred to use **9825**. Radio Kiribati, P.O. Box 78, Bairiki, Tarawa, Republic of Kiribati. If nothing else, write and tell them they're missed.

NICARAGUA – When it first came on the air Radio Miskut was a clandestine, supporting the winning side against the Sandinistas. Now it is a legit, commercial broadcaster. Even though they're said to be running just 500 watts the station can be heard fairly well and easily in North America. They use **5770** from 1200 to 1700 and 1800 to 0230, although they sometimes don't run that late. Radio Miskut, Barrio Pancasan, Puerto Cabezas, R.A.A.N., Nicaragua.

RUSSIA – Radio Sakhalin, **11840** is said by some to be broadcast-



Swedish Telecom ran some SSB test broadcasts back in 1978.

ing in USB, although most sources don't list it that way and when we heard it a couple of months ago it seemed to be in regular AM. Maybe USB is just an occasional thing.

SOMALIA – Another couple of extreme toughies are Radio Hargeisa in the Somalian city of the same name. It operates on **variable 7530**. Even professional monitors rarely hear this one, so the schedule is uncertain – not that it make's much of a difference in whether we actually hear it or not. Sign-on seems to be around 0200 or 0300, and that time would be the only shot at it we have. The address (as if you're going to need it) is P.O. Box 14, Hargeisa, Somaliland, Somalia.

The other belongs to one of the many tribal factions that had a hand in destroying this country a decade or so back. Radio Mogadishu uses **6750 or 6805** from 1000-1200 and 1600-1900, times, which leave no chance for reception here. There's no known address for this one.

UKRAINE – There are reports that a utility station uses Radio Omega Polis in Sevastopol as a frequency marker when the Ute has no traffic to send. The frequency is **17299**. You'll have to figure out when that band is open in your neck of the woods, then park on the frequency and cross your fingers.

UNITED STATES – The Armed Forces Radio TV Service (aka Armed Forces Network) has several sites on the air relaying AFN programming to military personnel stationed throughout the world.

AFRTS – Saddlebunch Key (generally listed as Key West) is on **4778.5 and 12689.5**.

AFRTS – Diego Garcia uses **4319 and 12579**. There's some question as to whether this one is still active, although considering the island's important role in the anti-terrorism war, one would think it should be.

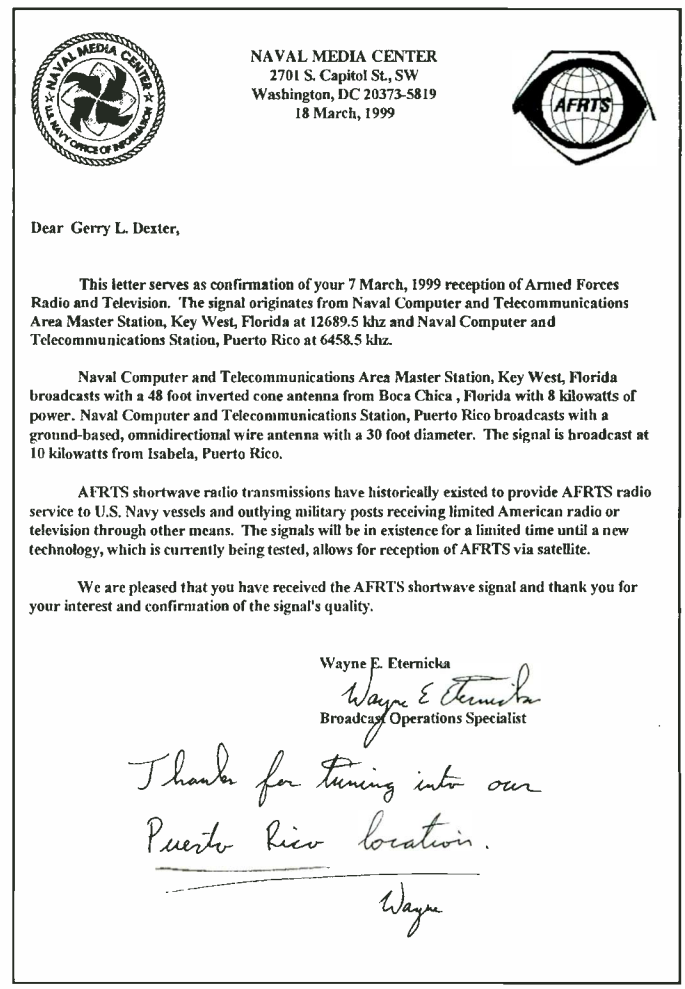
AFRTS – Sigonella, Italy uses **4996 and 10942.5**.

AFRTS – Guam is on **5765 and 13362**.

AFRTS Pearl Harbor, Hawaii operates on **6350 and 10320.**

AFRTS Puerto Rico (Roosevelt Roads) is assigned **6458.5**.

Although all of the stations are believed to be active 24 hours a day, although both frequencies aren't normally active at the same time. Incidentally, if you use the country list of the North American Shortwave Association (45 Wildflower Rd., Levittown, PA 19057 – **www.anarc.org/naswa**) Puerto Rico, Hawaii, Sicily (Italy) and Diego Garcia all count as separate countries. Note that these AFN broadcasts are the only way you can log Puerto Rico and Diego Garcia. One address serves for all: Naval Media Center, 2701 S. Capitol St. N.W., Washington, D.C. 20373-5819.



NAVAL MEDIA CENTER
2701 S. Capitol St., SW
Washington, DC 20373-5819
18 March, 1999

Dear Gerry L. Dexter,

This letter serves as confirmation of your 7 March, 1999 reception of Armed Forces Radio and Television. The signal originates from Naval Computer and Telecommunications Area Master Station, Key West, Florida at 12689.5 khz and Naval Computer and Telecommunications Station, Puerto Rico at 6458.5 khz.

Naval Computer and Telecommunications Area Master Station, Key West, Florida broadcasts with a 48 foot inverted cone antenna from Boca Chica , Florida with 8 kilowatts of power. Naval Computer and Telecommunications Station, Puerto Rico broadcasts with a ground-based, omnidirectional wire antenna with a 30 foot diameter. The signal is broadcast at 10 kilowatts from Isabela, Puerto Rico.

AFRTS shortwave radio transmissions have historically existed to provide AFRTS radio service to U.S. Navy vessels and outlying military posts receiving limited American radio or television through other means. The signals will be in existence for a limited time until a new technology, which is currently being tested, allows for reception of AFRTS via satellite.

We are pleased that you have received the AFRTS shortwave signal and thank you for your interest and confirmation of the signal's quality.

Wayne E. Eternicka
Wayne E Eternicka
Broadcast Operations Specialist

Thanks for tuning into our Puerto Rico location.
Wayne

The Naval Media Center verifiesw reception reports for all AFRTS broadcasts on shortwave.

The Voice of America used to have a lot of frequencies, which used sideband transmissions to "feed" broadcasts to their relay stations around the world. As recently as a couple of years ago one could tune to one of those out-of-band frequencies in the upper 7 MHz range and switch back and fourth between two programs – one on USB, one on LSB. But satellites have taken the place of nearly all of these. There are just a couple left, probably kept in operation as standbys. You can find VOA from Greenville, NC on **6873** listed as Saturdays only from 0700-0730 (**sometimes** this is replaced by **10869**). Another channel is **18275**, used on Sundays from 1400-1430. Reception reports for all VOA broadcasts can now be sent to: John Vodenik, IBB/VOA, Delano Transmitting Station, 11015 Melcher Road, Delano, CA 93215.

WWFV – World Wide Freedom Voice - (formerly WGTG) in McCaysville, Georgia – one of the many powerhouse commercial religious broadcasters we are blessed with – airs its programming in upper sideband on **3270** from 0200-0600; **5085** from 0000 to 0600 and **6890** from 2300 to 0200. Reports go to: Box 1131, Copperhill, TN 37317.

WBCQ – The Planet – in Monticello, Maine, uses sideband on **9330** (**sometimes 9335**) from 0000-0700 and again from 1500-0000. Reports to: 79 High Street, Kennebunk, ME 04043.

And if all of the above doesn't keep you busy or you have nothing better to do, you can hang out on **6955** on the weekends and wait for a pirate broadcaster to show up. Often as not these guys tend to use upper sideband. Most of them are based in the eastern half of the country so easterners have the best chance of hearing any number of them over whatever period of time you want to devote to the pursuit. ■

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Base performance in a hand-held receiver!

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- Download free control software from AOR web site
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- True carrier reinsertion in USB and LSB modes Includes 3 KHz SSB filter!
- Detachable MW antenna with negative feedback
- Optional internal slot cards expand capabilities. Choose from Memory Expansion (up to 4,000 memories), CTCSS Squelch & Search, Tone Eliminator, Voice Inverter** and Record Audio (saves up to 20 seconds of audio)
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- 8.33 KHz airband step is correctly supported
- Noise limiter and attenuator
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- Band activity "scope" display with "save trace" capability
- Four-way side panel rocker switch allows one-hand operation
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- Operates on 12 VDC external power
- 4 AA Ni-Cd batteries supplied, also uses standard AA dry cells
- BNC antenna connector
- Wide choice of accessories

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- Coverage from 530 KHz ~ 2040 MHz*
- Receive Modes: WFM, NFM, SFM, WAM, NAM, USB, LSB, CW
- New front end and RF stages for superior sensitivity
- 2 VFOs (A/B)
- 1000 memory channels (20 banks x 50 memories/bank)
- Alphanumeric channel labels
- Scan rate up to 37 channels/second
- Add up to 3 optional slot cards: Tone eliminator, CTCSS, Voice Inversion**, Recording, External memory
- Accommodation for Collins® Mechanical Filters
- RS-232C port
- 10.7 MHz IF output (WFM mode only) can be used with SDU 5500 Spectrum Display Unit.
- 12 VDC operation
- BNC antenna connection
- Download free control software from AOR web site

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technology showcase

new product performance analysis

by Harold Ort, N2RLL, Editor

xPower 300 Emergency Power Generator

There seems to be a proliferation in portable power devices these days. A walk through department stores, the mall and Sears will net you a variety of multi-sized battery packs; some good, others probably not worth the plastic used for the case.

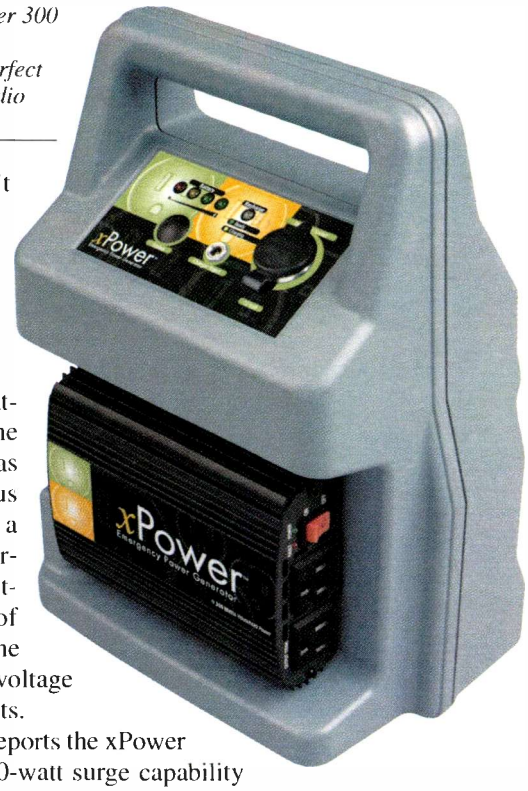
As I've reported to you recently, we'll be taking a look at several of these portably power units. This month, in our spotlight is the xPower 300 Emergency Power Generator which retails for $149. The company, Statpower Technologies Corporation, headquartered in Canada and on the web at www.statpower.com, merged with Xantrex Technology, Inc. a couple of years ago. Today Xantrex — and Statpower brand products — are primarily sold in consumer and mobile channels. Their products are typically found in marine stores nationwide.

"The xPower 300 Emergency Power Generator is a heavy duty self-contained portable power source, much like other units out there...it's compact enough to go virtually anywhere, yet powerful enough to get your vehicle either jump-started or your radio gear up and running for hours."

The xPower 300 Emergency Power Generator is a heavy duty self-contained portable power source, much like other units out there, with a couple of notable exceptions: It has a built-in 300-watt inverter with two AC outlets so you can use small portable AC devices without buying a separate inverter and plugging in cables from here to Sunday. It's also compact enough to go virtually anywhere, yet powerful enough to get your vehicle either jump-started or your radio gear up and running for hours.

The battery is a sealed lead acid type, rated at 21 amp hours. There are two DC connections; one is top-mounted and well sealed with a rubber cover that provides 12 Vdc at a max of 12 amps, and a side-mounted heavy duty connection (with the provided cables) 12 Vdc, 50 amp max.

At the onset, after a standard overnight charge, I measured the DC voltage with a RadioShack digital multimeter at 13.42 Vdc. A 25-watt AC bulb into the inverter gave me four hours continuous use before I decided to recharge the pack. AC voltage at that point was 98 volts and DC measured 12.65. We also recently suffered an electrical outage just as we were ready to go out for the day. Let's face it, there isn't much you can do; it's like opening the car's hood when the engine dies. You stand there and look at it, helplessly. So instead of canceling the shopping trip that Saturday I plugged the fish tank heater and small pump in the xPower unit. That was at 9 a.m. We returned that evening — the power had come back on after about three hours



The Xantrex xPower 300 Emergency Power Generator is the perfect addition to your radio room.

— but it didn't matter because the tank's water temperature remained in the "safe" zone, and the little pump kept operating all day. The xPower unit has four small status lights indicating a full charge or nearly discharged battery. Only one of the lights had gone out, and the AC voltage measured 100 volts.

The company reports the xPower 300 to have a 500-watt surge capability (with 300-watts of continuous AC power); plenty to run small power tools, TVs, camcorders, and your radio equipment independent of household current.

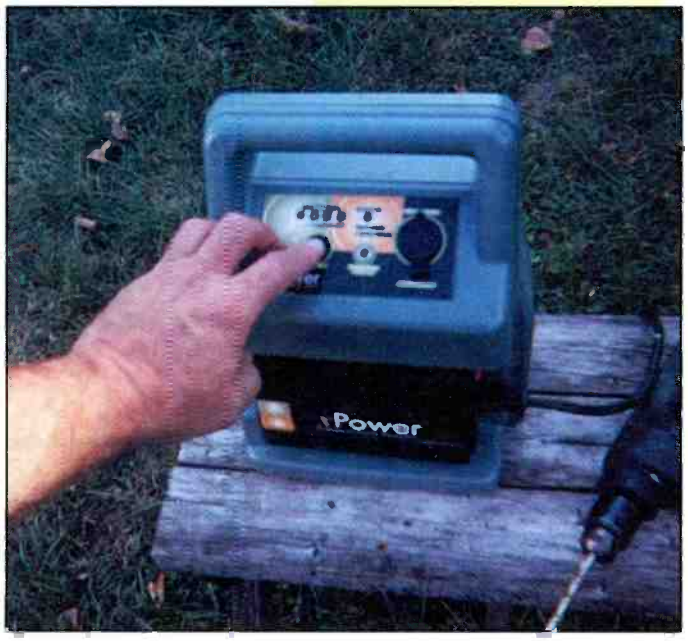
More Lights And Radios

I recharged the battery for a full 24 hours and measured the DC voltage as 13.42 Vdc and of course the green light indicated a full charge. I decided to let that 25-watt lamp drain a while longer, turning it on about 9:15 one morning. At noon, it was still kicking. Two hours later — now a total of about five hours — still bright and begging for more, I kept it on for another hour before calling it quits. You never want to run the lead acid battery down completely. The xPower 300 has a built-in audible alarm to warn of a low-battery condition when voltage drops to about 10.7 volts, and there's also a low-voltage shutdown at about 10 volts.

Remembering the center pin on this (and most) unit is positive, I plugged in a Cherokee AH-100 CB walkie-talkie using the standard cigarette lighter cord supplied with the xPower. Let's just say that I was able to use the AH-100 all day on sideband without worrying about losing power. I talked everywhere and got no reports of unusual noise or problems caused by the power supply. Just for kicks, I turned down the volume almost

Using the xPower 300 Emergency Power Generator outside with a 1/3 hp Sears drill.

Push the button for an instant look at the xPower 300's battery condition.



xPower 300 Operating Times*

AC Powered Products

Item	Watts	Hours
Cordless Phone	5	46
Home Security System	5	46
Portable Stereo	10	18
Five-inch Color TV	20	8
Laptop Computer	25	7
Fluorescent Work Light	14	11.5

DC Powered Products

Item	Watts	Hours
Cell Phone**	6	41
Emergency Light (included)	8	29
Portable Cooler	30	4.5
Tire Inflator	100	1

*Depending on charged state of unit
**Represents talk time available from 12 recharge cycles

completely and left the AH-100 on, and plugged into the xPower unit all night. The next morning the xPower 300 was still going strong, and didn't need to be recharged. I could have easily used the handheld CB all day long without interruption!

Portable Soldering And Drilling

In my reviews of power products such as the xPower 300 unit, I'll be testing various household appliances you might also use. We're not going to be plugging in mom's hairdryer or kilowatt ham linear in these units, because they're simply not designed to handle the load. Don't laugh — there are plenty of folks who don't read the instructions and think that if there's an electrical socket they can run the home refrig. Not true, so don't waste your time.

Last weekend it was appropriately cold enough that I decided to finish hooking up my new 10-meter vertical. Just to be on the safe side, I ground everything with eight-foot copper ground rods, running a short wire from the base of the three 10-foot poles to the ground rod. I carried the xPower unit outside after a full overnight charge (frankly, I recommend keeping the battery topped off by having it always plugged into the wall charger) along with a 100-watt soldering gun. What a great way to do outside soldering; no need to run a long power cord to the garage for power, and no worry about tangling the cord around trees and bushes in the process! Measured voltage at the xPower AC outlet was 111 volts. I soldered two short wires in the yard, then moved into the garage and soldered three PL-259s (not my favorite weekend activity, but it needed to be done!). In each instance the soldering gun heated up as if I were using a standard household AC circuit.

Later, I put the xPower 300 unit to work drilling 20 test holes in wood using a Sears 1/3 hp drill, using it about 10 seconds each time. Remember, it's easy to figure approximately how long a lamp or device will work (depending on the charged state of the battery): For example, a 100-watt AC light bulb should run about 2.5 to 3 hours; and a 60-watt bulb about four hours or so before the battery needs to be recharged. Remember, these are approximate running times.

If your portable power requirements are modest, and you want a mid-sized convenient and dependable portable power unit, check out the xPower 300 Emergency Power Generator by Statpower. It weighs in at just less than 18 pounds and is a very capable system. Accessories included with the xPower 300 are a DC emergency light, AC charger, DC charging cable, and heavy-duty jump-start cables.

Your handheld radios will operate perfectly, and you'll have the benefit of being able to hit the road at a moment's notice — face it: today, you just don't know when you might need that get-up-and-go emergency power. For more information, contact Xantrex at Xantrex Technology, Inc., 8999 Nelson Way, Burnaby, BC Canada V5A 4B5 or phone 604-420-1585. In North America you can also use their toll-free FAX line at 800-994-7828. Please tell them you read about their xPower 300 in *Popular Communications*. ■

the wireless connection

a look behind the dials

by Peter J. Bertini <radioconnection@juno.com>

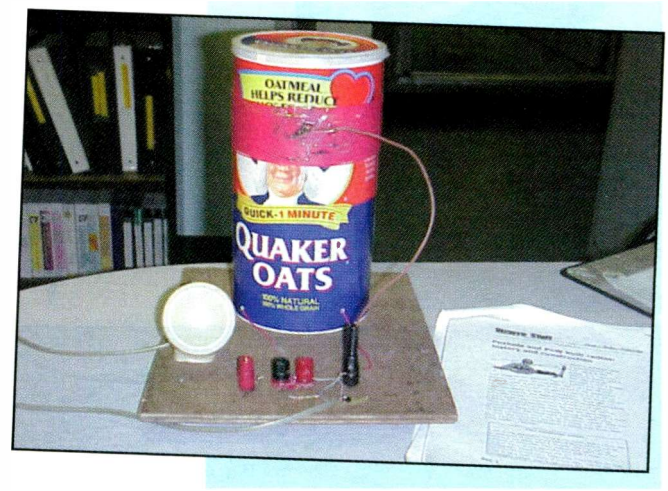
Pete Opens "The Connection" Mailbag!

This month we'll open the "Wireless Connection" mailbag and share with you a few of the letters and E-mails we've had the pleasure of receiving over the past several months. First, here's a nice letter from Bill Pasternak, a well-known columnist in his own right, concerning our recent *Your Dad's Chevrolet* Delco car radio restoration. Bill shared the following with us: "My dad had a '39 Dodge with no radio. My first car was a '54 Chevy with a similar radio to the one you restored — complete with built in 6"x 9" speaker. When the Chevy died in '62 I pulled the radio, tore out the vibrator and external components and subbed a 6-volt 12-amp filament transformer. A 130' piece of *long-wire* [*antenna, ed.*] went into the antenna jack and it replaced the awful sounding Emerson 5-tuber at my bedside.

"This puppy was a bit unusual — probably a 'step-up' model. It had a 6SK7 tuned RF stage, 6SA7 pentagrid converter; 6SK7 1st IF, 6SJ7 2nd IF, and a 6SQ7 Detector-AVC-1st audio that was transformer coupled to a pair of push-pull 6V6's. Needless to say with a 130' antenna and two IF stages it was great for broadcast band DXing, mostly on WOR where I listened to 'Shep' at night and 'Gambling' in the morning. It was ugly, but it sounded sensational. Sorry I can't send a photo, but the only photo I had was given to Shep back in the late '60s when I got to know him over the WA2SUR repeater. Let's face it. People like Art Bell and Rush owe their careers to Shep. He single handedly invented what we call in this day and age 'talk radio.'

"Regarding vibrators, I actually have a piece of ham gear that uses one: A Lafayette model HE-45B 6 meter AM transceiver circa 1962. DeWald built it in Long Island City under contract to Lafayette Radio and Electronics, before they discovered they could save big bucks building in Japan. Once in a while I haul it out of the closet, hook it up to the Astron 13.6 VDC bench supply, and make it *hummmmmmm*. It's about 40 years old and it still works! (Albeit there are very few stations on 6-meter AM anymore.)

"One last note. Solid-state replacement vibrators were originally nothing more than the multivibrator you described. Any two closely matched power transistors worked fine. I built loads of them externally onto the chassis of numerous car radios back in the mid '60s. I'm told the later ones were a bit more sophisticated using the famed NE555 timer chip, an inverter chip and some one-shots to clock a set of switching transistors. A bit of overkill in my book, but these were touted by places like Lafayette and Gem as ' . . . the last replacement vibrator you will ever need.' Well, that was true. By 1970 only some hams and military gear still used vibrators. The 12-VDC plate potential tubes (12AD6, 12AF6, etc) had made vibrators obsolete. I also remember that Sylvania was trying to push a 12 VDC plate potential Beam PowerTube as an alternative to germanium transistors. They claimed up to three watts (??) in a push-pull pair — but I cannot think of any manufacturer that tried the design. Well, its 2 a.m. and time to listen to 'Gunsmoke' on the KNX Drama Hour on my rebuilt National NC-88. Sounds almost as good as that old 1954 Chevy radio, but not quite. Like my departed friend Shep, I too am a 'night people.' Bill Pasternak, WA6ITF"



A crystal set using an oatmeal box as the coil winding form.

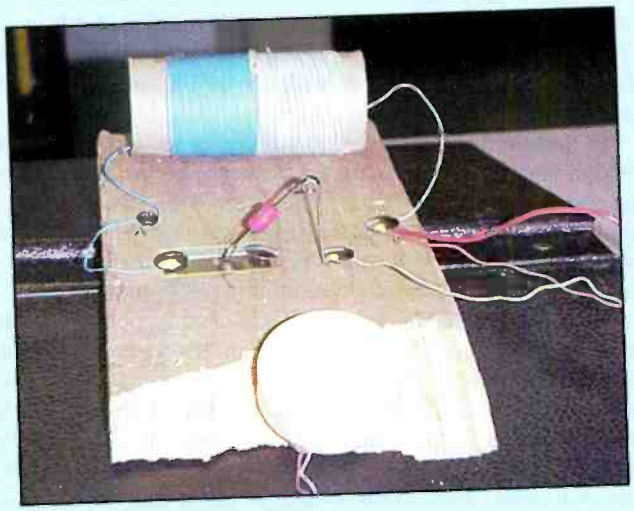
On Phone Capacitors

Mike Grimes K5MLG shares some thoughts on our February 2001 "Wireless Connection" column's discussion of crystal set receivers. "Peter, Thanks for the interesting articles on crystal radio sets. I have been following the articles for some time and kept thinking I would build one. Well, guess what, I finally got around to it.

"I've been interested in testing various configurations and also using some old surplus parts gleaned from days gone by. So with the trusty *ole* soldering iron I built up a 'breadboard' in which I could easily change out parts. Having 'cannibalized' an Ocean Hopper years ago, I still had the plug-in coils, so naturally it became an integral part of the set's *front-end*. Also, I had never seen a set with an S-meter as illustrated in several of your example sets, so I had to have one. As luck would have it, I found a very sensitive plus/minus 15-microampere meter and installed it similar to your examples. After wiring the set (it worked like a charm), I now had a very sensitive and quantitative way to make various measurements with different configurations. (I can send you a picture if you have interest).

"I was intrigued with the *phone capacitor* statement in your article of February 2001, *Popular Communications*. I too have wondered about the need for such a capacitor in the circuit. I have observed that a crystal sets works with or without one.

"The circuit used was a basic tuned front-end utilizing a 1N34A diode. Two sets of common phones were tested: Brandies Superior matched tone and Baldwin type C. Both are of the 2000-ohm type. Tuning in a strong station, tests were

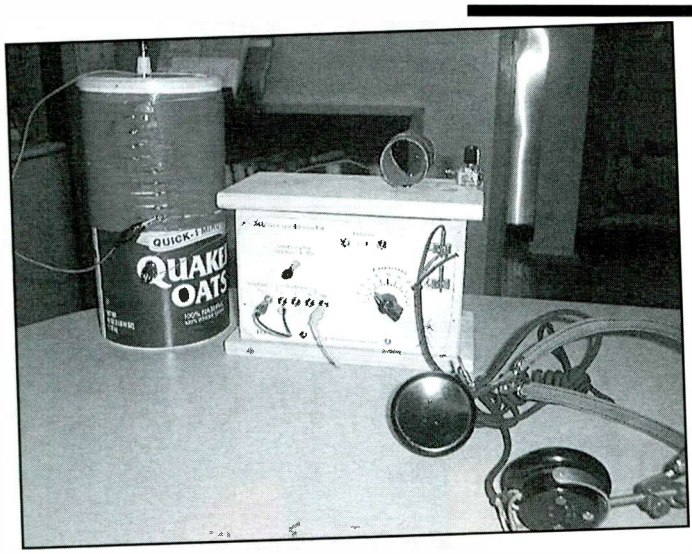


In this crystal set, a razor blade and safety pin serve as a crude detector. Detector action is based on the diode action caused by non-linearities on the metal surfaces.

Using a glass bottle for a coil form is rather unusual, but on the other hand it may have some good low-loss characteristics. Note the homemade earphone as discussed in the text.

simple: with and without a 0.001 mfd phone capacitor. The result was somewhat surprising. With both types of phones, the signal strength improved by about five microamperes with the capacitor in place! The tuning capacitor had to be re-peaked after each insertion of the capacitor and the maximum reading taken for the same station.

"The insertion of the capacitor apparently reduced capacitance to the tuned circuit, as it is series to the tuned circuit. Thus, capacitance had to be added with tuning capacitor to receive (peak) the same station. The phone capacitor is in parallel with the capacitance produced by the winding in the headphones; and, therefore, the added capacitance is somewhat less than the



Another view of the oatmeal crystal set, and a kit crystal set that also offers SW coverage in addition to the standard BCB coverage. See the XS-101 kit at this URL for more information: http://www.midnightscience.com/catalog5.html.

0.001 mf. The capacitance would have been reduced by about 78% if this were not the case. By the movement of the added tuning capacitor, I estimate it must have been only about 20%. Thus the phone capacitance is significant (and is the reason the set will work without the capacitor.)

"Apparently adding the phone capacitor better matches the detector and phones' load impedance to the L-C circuit impedance. This in turn decreases the load resistance and maximizes the set volume (power). There is a nice discussion of this in *The Crystal Set Handbook* (*The Crystal Set Handbook and Volume III of the Xtal Set Society Newsletter* by Philip N. Anderson, chapter 7.)

"In addition, often I use a signal tracer to 'listen,' without headphones on my ears, to the crystal set by connecting it across the phone leads. It is of interest that removing the capacitor or the headphones or both significantly reduces the volume and the current indication on the microampere meter! I hope you find this of interest and not too rambling. Regards, Mike"

I've been told that the capacitor is necessary, but that enough stray capacity exists between the headphone windings to preclude the need for a separate capacitor in most cases. This topic has been discussed in some technical depth on the Crystal Set Radio Club on Yahoo! (http://clubs.yahoo.com/clubs/thecrystalsetradioclub); all posts are archived for those who wish to research earlier discussions. Please, all photos are welcome; and we try to run them as space permits.

AM Radio In A Tin

Rich Klingman asks: "Hi Peter, I read with interest your article in the Jan. 2002 issue of *Pop'Comm*. I disassembled many an old car radio in my wayward youth for the parts. I was wondering, with the use of transistors and IC chips, if it would be possible to construct a simple AM BCB radio inside of an *Altoids* tin? Not sure how it would be powered — maybe with one or two AA batteries — but my main question is would it work? It would be the ultimate 'James Bond' setup, I would think. Rich"

Hi Rich. I think you missed my column on the ZN414 and MK484 AM TRF receiver ICs. This is *the* chip you are looking for to make your *Altoids* tin AM radio a reality. For those who have ordered the MK484 chips, all orders are being shipped within two days of the orders being received. I have about 20 devices left for those who still want some. If I have time over my Christmas vacation I'll whip a quick *Altoids* box-tin receiver together and show it in a future column.

In The Homebrew Can-Do Spirit

While stationed in Korea last summer, Sergeant Roberts wrote us several times about his homebrew crystal set experiences. Here are a few of his letters. "Pete, This is Sgt. Evan Roberts. Here are the radios I've built here in Korea. I've been showing the other Special Ops guys how it is possible to build radios out of the barest of materials. One radio is an oatmeal box style (see Photo 1), and the other is one uses a razor blade detector (see Photo 2). Both work well. I use the outer shielding of any available TV cable for the antenna and a water pipe for the ground."

In a follow-up letter Evan continued: "Here are a few pictures of an earphone I constructed out of an orange juice can, some wire, a toilet paper roll, a small coil, and a tiny magnet I had on my refrigerator. It is not that sensitive but it does work. I've used it on my razorblade [detector] radio and my shortwave crystal set (Mr. Peebles kit)." See Photos 3 and 4.

Well, that's it for this edition of the "Wireless Connection!" I'm home on vacation for the next few weeks, until the end of 2001 as this is written, and hopefully I'll get a few construction projects underway for the 2002 year. ■

Coming Next Month

IPN Incident Paging Network — A *Pop' Comm* exclusive look at how you can be instantly E-mailed breaking news about fires, accidents, weather and much more. You can also be a reporter for IPN. Check out our Technology Showcase in April!

In Gordon's West's *"Radio Resources"* column you'll get *"The Inside Scoop On Rechargeable Batteries"* and learn how to prevent the dreaded low-battery syndrome from ruining your radio day.

Radio Norway has just ended broadcasting on shortwave. Get the details in next month's *"Global Information Guide"* by Gerry Dexter — and all your international shortwave broadcast loggings.

Only $10.95 ea. +$2 s/h

CQ 1994 1995 1996 1997 1998 1999 2000 2001 and now... the 2002 CQ calendars

better than ever, all digitally photographed, and still 15 months of value.

The new 2002/2003 CQ Radio Classics Calendar features fifteen magnificent photos of some of the memory-jogging, heart-tugging gear that so many of us treasure or aspired to years ago. (Publisher's Note: They're making antiques a lot newer than they used to!) This year's Radio Classics Calendar features some of the great equipment of the '50s and '60s, with a smattering of the 1940s and 1930s.

Here's what's featured this year:

Collins 75S-3 Receiver, 1961; Lakeshore Bandhopper VFO, 1957; Gonset Commander II Mobile HF Transmitter, 1955; Gonset 913A 6 meter amplifier, 1964; Technical Materiel Corporation (TMC) GPR-92 Receiver, 1964; Hammarlund HQ-170 Receiver, 1958; McElroy Model 100 Straight Key, 1941; Sonar XE-10 Modulator, 1947; National NC-300 Receiver, 1955; Hallicrafters S-85 Receiver, 1954; Heathkit SB-500 VHF Transverter, 1969; Sideband Engineers SB-34 Transceiver, 1965; Swan 400 Transceiver, 1964; Drake TR-3 Transceiver, 1963; Utah UAT-1 Transmitter, 1937.

How many do you recognize? How many did you own? How many did you wish you owned?

The 2002/2003 CQ Amateur Radio Calendar brings you fifteen spectacular digital images of some of the biggest, most photogenic Amateur Radio shacks, antennas, scenics, and personalities. These are the people you work, the shacks you admire, the antenna systems you dream about having, all digitally captured by the talented Larry Mulvehill, WB2ZPI, CQ's own roving cover photographer. Larry's travels this year took him to Colorado, Montana, Wyoming, Texas, Florida and New York, capturing some of the greatest Amateur Radio photos of the year especially for this annual favorite calendar. From winter scenes of the frosty northeast to pedestrian mobile in the Rockies, you'll love this traveling Amateur Radio photo show.

All calendars include dates of important Ham Radio events such as major contests and other operating events, meteor showers, phases of the moon, and other astronomical information, plus important and popular holidays. The CQ calendars are not only great to look at, but they're truly useful, too!

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global information guide

listening to what your world says every day

by Gerry Dexter

Colombia Gets An Idea

Point Of Order

The "Christian Voice" outlet in Australia has changed its name to: "Voice International" (Ltd.)

It's been awhile since we've had much shortwave news from Colombia, but now comes the oddly named, **Idea Radio**. As of this writing it is being well heard on **7380** at various hours of the evening and early morning. Actually, the station is likely unlicensed, and thus is more a pirate than a legitimate shortwave broadcaster. They're playing a wide variety of music and programming in English as well as Spanish. They announce address of P.O. Box 25733, Bogot, Colombia for reports, although they are supposedly located near Barranquilla. E-mail: idearadio@hotmail.com. The 7380 spot probably won't be where they end up.

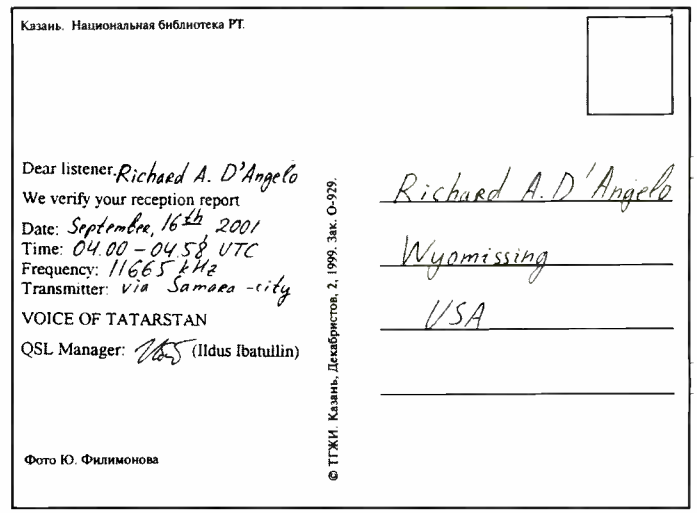
The case of the incredible shrinking broadcaster! Swiss Radio International, having now discontinued use of all its domestic transmitter sites, has reduced its English language broadcasts to just these: 0730 to 0800 on **9885, 13695, 17665**; 0830–0900 on **21770**; 1100–1200 on **9540**; 1730–1800 **9605, 13790, 15555**; 1930–2030 on **9605, 13660, 15485, 17660** and 2330–0000 on **9885 and 11660**.

This puts SRI more or less on a par with Radio Tirana! And, as they admitted some months ago, the schedule for English is plainly not designed for a North American audience. Great going, guys.

Reception from the recently refurbished **Voice of Nigeria** on **15120** continues improve and the hours during which this channel is in use seem to be expanding even further. At present the broadcasts are in English and French. German and a couple of local language are to be added later. The broadcasts also run on **7255** (heard in the late evening); **11770** is also announced, but probably isn't active yet. Eventually they want to be on the air 18 hours a day in English, with another outlet carrying the other languages. They also plan to add a couple more transmitters. The Radio Nigeria outlet at Ibadan (6050) returned to the air some time ago. Apparently Nigeria is serious about restoring what was once a well-run and fairly extensive network of shortwave stations. Yea!

More good news: It seems we can expect to be chasing the **Congo** (Kinshasha) outlet at Lubumbashi again. This has been inactive for quite a few years but now they've picked up a shortwave transmitter and may well be back on the air by now. The station was a good catch during its previous run and it looks like nothing will change — they're only going to run one kilowatt. No frequency or schedule information available yet.

There's a new religious broadcaster on the air from **Guatemala**. Radio Amistad, in San Pedro la Laguna near the famous Lake Atitlan, is now in operation on **4700**, running just a few hundred watts. Check for them in the early morning hours (around 1100) or the early evening period around 0000 or 0100. Sometimes they sneak through the noise. No specific address is available but a report addressed simply to the station and town should make it okay.


Казань. Национальная библиотека РТ.

Dear listener, Richard A. D'Angelo
We verify your reception report
Date: September, 16th 2001
Time: 04.00 - 04.58 UTC
Frequency: 11665 kHz
Transmitter: via Samara -city
VOICE OF TATARSTAN
QSL Manager: (Ildus Ibatullin)

Фото Ю. Филимонова

© ТГЖИ. Казань, Декабристов, 2, 1999. Зак. О-929.

Richard A. D'Angelo
Wyomissing
USA

A QSL from a station most listeners never heard of! The Voice of Tartarstan sent this QSL card to Rich D'Angelo in Pennsylvania.

China Radio International's headquarters building is featured on the sticker they're including with their QSL replies.

The shortwave sister of private Canadian broadcaster **CFRB** is back on the air. We're hearing the **6070** CFRB relays over CFRX quite well at times, especially late in the evening.

It seems the Egyptian state radio (**Radio Cairo**, etc.) has had a significant equipment improvement and is now running **500 kW** on some of their transmissions, including those to North America. We haven't noticed any difference, have you?

RDP International in **Portugal** is also about to upgrade. They plan to **add a 300 kW transmitter** and associated antennas and should be on the air later this year. And, in the "never satisfied department" we might add that it would be good if they restored English broadcasts while they're in the mood for improvements.

The tough-to-hear **Radio Nepal** is no longer using its longtime 5005 frequency. It's moved to **7164** variable. This should be active all the way through the early morning hours when this band is open. So, depending on propagation, interference, and wind direction you may have a slightly better chance of bagging this one than when it was on the much lower frequency.

Jack Linonis in pennsylvania tours the world in front of this two-receiver set-up.

African Beacon is now relayed via the United Arab Emirates daily at 1800 to 2200 on **15365**.

Radio Baghdad, not generally very well heard since the Gulf War, has been showing up on some new dial points of late (in addition to 11787), namely **9687, 9887, and/or 9917**. They've also been spotted on **11652**, rather than 11787.

XERTA, that odd Mexican with the big, big plans which has never quite gotten its act together, is being reported again. Originally designated to use 4800, it is now floating all over 60 meters. Anything **between 4700 and 5000** seems to be fair game so if you hear something on a frequency where you rarely hear anything, and it sounds a bit distorted as well, it's probably them!

Bruce Wins The Book!

Bruce Burrow is our book winner this month. Bruce gets a copy of the 2002 edition of *Passport to World Band Radio*, a reference every shortwave listener and DXer should have at the ready at all times. It's the first thing we pick up when we want to check something. Bruce's book will come from the good people at Universal Radio in Reynoldsburg, Ohio. In addition to Passport you really need a copy of their humungous catalog of radios, antennas, accessories, books, and dozens of other near-necessities of life! Get one by calling Universal at (614) 866-4267 or E-mail dx@universal-radio.com or write them at 6830 American Parkway, Reynoldsburg, OH 43068-4113.

Now the usual pitch: your shortwave broadcast logs are always sought and always welcome. Please just remember to list your catches by country, double or triple space between the logs and add your last name and state abbreviation after each. We're also looking for spare QSL cards we can use as illustrations. Also station schedules, photos — anything along those lines you'd care to lay on us! Thanks for your continued interest and support!

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, **11765** at 1300–1400. Several KNLS IDs and familiar KNLS voices. (Silvi, OH)

ABBREVIATIONS USED IN THIS MONTH'S COLUMN

AIR	All India Radio
BSKSA	Broadcasting Service of the Kingdom of Saudi Arabia
CBS	Central Broadcasting System
EZL	Easy Listening (music)
FEBA	Far East Broadcasting Association
FEBC	Far East Broadcasting Company
NA	National anthem
NBC	National Broadcasting Corporation Namibia Broadcasting Corporation
NHK	Nippon Hoso Kyokai
OA	Peruvian
RAE	Radiodifusion Argentina al Exterior
RAI	Radiotelevisione Italiana
RDP	Radiodifusao Portuguesa
REE	Radio Exterior de Espana
RNZI	Radio New Zealand International
RRI	Radio Republik Indonesia
RTT	Radiodiffusion Television Tunisienne
RUI	Radio Ukraine International
SCI	Song of the Coconut Islands
SIBC	Solomon Islands Broadcasting Corporation
SRI	Swiss Radio International
VOA	Voice of America
VOIRI	Voice of the Islamic Republic of Iran
VOT	Voice of Turkey

ALBANIA — Radio Tirana, **6115.7** at 0330–0400 with news, local music, ID. Strong, but unstable. Less variable on **7160.2**. (Alexander, PA) **7160.8** at 0230 with IS, ID and schedule. (Burrow, WA)

ALGERIA — RTV Algerienne (presumed) **15160** at 1836 in unid. language with talk by man, woman. (Jeffery, NY)

ANTARCTICA — Radio Nacional Arcangel, **15475.5** at 2030 with brief SS talk by woman, then continuous music to 2056 ID, music, another ID and sign off anmt at 2100. Weak with deep fades. (D'Angelo, P) 2037–2100. Fair by 2055; final comments at 2100, ID and off. No anthem. (Montgomery, PA)

ARGENTINA — Unidentified LSB feeder on **15820** at 0315 to past 0400. SS talk, ballads, phone calls. Better on **//20276** LSB. (Alexander, PA) Radio Continental, **20276** LSB at 0210 with ID, man and woman annors, and "Classical Music International" program. (Montgomery, PA) 0230 with 2 + 1 time pips, news by woman announcer, and ad string at 0240. **//15820** LSB. (D'Angelo, PA) RAE, **11710** at 0215 with music, ID, "News from Buenas Aires." (Burrow, WA) **15345** with ID at 2354, marimba music. (Brossell, WI)

ARMENIA — Voice of Armenia, **9960** at 1940 with IS, anthem, ID, schedule, news. (Burrow, WA)

ASCENSION ISLAND — BBC relay, **7160** at 0310. (Brossell, WI) **17830** at 2000. (Jeffery, NY) VOA Relay, **17580** in FF at 1925, ID at 1830, then news update. (MacKenzie, CA)

AUSTRALIA — Radio Australia, **9580** at 1225 and **15515** at 0408. (Newbury, NE) **11650** at 1243. (Brossell, WI) 1530 with "Religion World." (Burrow, WA) **15240** with news at 2301. (Jeffery, NY) Vision International (Christian Voice) at 0300 with EE Bible stories, "Christian Voice" IDs, schedule, contemporary Christian music. Weak but fading up to fair at times. Barely audible on **//21680**. (Alexander, PA)

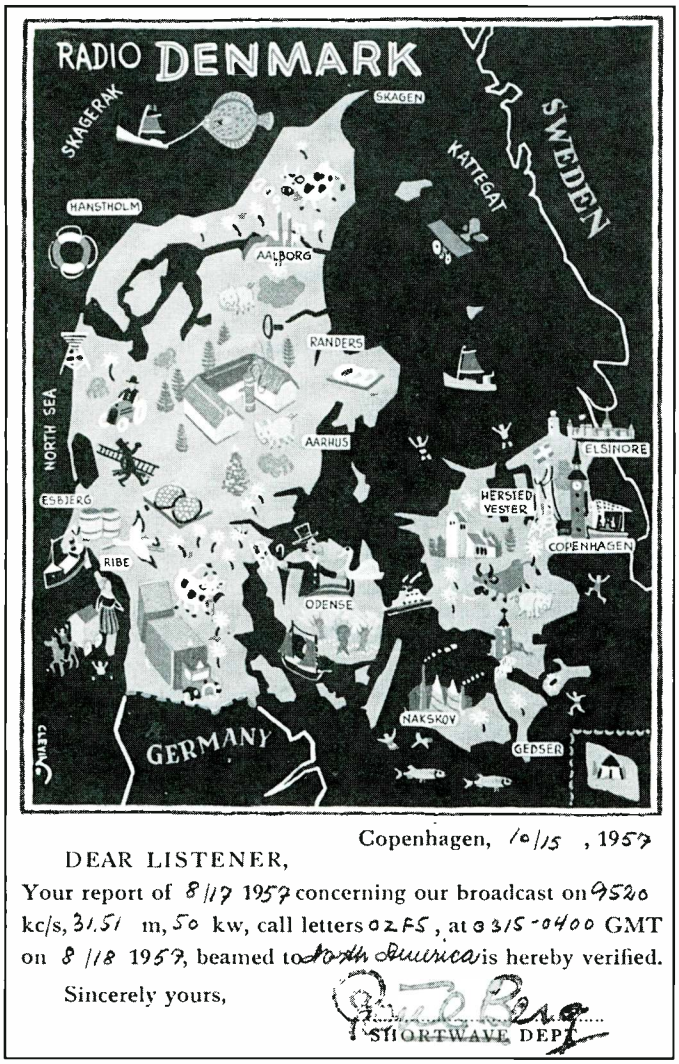
AUSTRIA — Radio Austria Int'l, **9870** at 0132 with news. (Newbury, NE) **13730** in GG at 1640. (Brossell, WI)

BELARUS — Radio Minsk, **7210** at 0216 with economic report, ID, address, phone and email info. Music to 0230, then multi-lingual ID, IS and into unid. language. (Burrow, WA)

BELGIUM — Radio Vlaanderan Int'l, **9860** at 1136 with Lizst piano competition in Belgium. (Newbury, NE)

BOLIVIA — Radio Yura, **4716.8** at 2328 with rustic group vocals, ID by man. Poor. (D'Angelo, PA)

BOTSWANA — Radio Botswana, **4820** at 0245 sign-on with familiar barnyard IS and choral anthem at 0259, opening ID and frequency anmts. Mix of music and talks. (D'Angelo, PA) 0245 with barnyard



Copenhagen, 10/15, 1957

DEAR LISTENER,

Your report of 8/17 1957 concerning our broadcast on 9520 kc/s, 31.51 m, 50 kw, call letters OZ F5, at 0315-0400 GMT on 8/18 1957, beamed to North America is hereby verified.

Sincerely yours,

SHORTWAVE DEPT.

From the QSL Museum: This Radio Denmark QSL from 1957 takes us back to better times for the station, then still broadcasting from its own transmitters — and in English. This card was for reception on 9520 where the station was a regular in the evenings.

QSLs, photos, calendars, and pennants make for a colorful wall in the shack of Jack Linonis. Note the "Listening Post" monitors card near the top of the third row from the right!

IS, program from 0301 with what I think is the national anthem, woman with ID at 0302 and short talks, music program at 0305. I do not remember a female annor on this station in the past. VOA relay **7375** at 2143 with news items in "Dateline" program. (Montgomery, PA)

BRAZIL — Radio Difusora Londrina, **4815** at 2257 with ID, frequency anmt, lively vocals. (D'Angelo, PA) Radio Alvorada, Landline, **2310** with nice jingle ID, man with ID prior to "A Voz do Brazil" program. (D'Angelo, PA) Radio Cultura Filadelfia, **6105** at 2340 with ID at 2358, female with jingle. Earlier ID as simply "Radio Cultura." VOA sign-on killed it at 0000. (Montgomery, PA) Radio Nacional da Amazonia, **6180** with PP music at 0028. (Miller, WA)

BULGARIA — Radio Bulgaria, **7400** with 0000 sign-on, **//9400**. (Montgomery, PA) **11700** at 2345. (Newbury, NE) **11700** at 0223 and **11900** at 1909. (Burrow, WA)

CANADA — Radio Canada Int'l, **5960** at 0125 with news reports. (Newbury, NE) **9515** at 1325 with "This Morning." **13655** in FF at 1245. (Northrup, MO) **15170** at 0150 with DX program. (Newbury, NE)

CHINA — China Radio Int'l, **9560** at 0415 and **9875** at 1504. (Newbury, NE) 0335 via Spain on 9690. (Becker, WA) **11765** at 1400. (Silvi, OH) **11990** at 1320 and **13610** at 1255, both in CC. **15135** in CC at 1235. (Northrup, MO) **13680** at 2310. (MacKenzie, CA) **15100** in CC at 2308. **15260** in CC at 2305. (Jeffery, NY) China National Radio (ex-CPBS), Beijing, 5010 in CC at 2232. Weak and ID is tentative. (Montgomery, PA) **17605** with man and woman in CC. Very poor. (Jeffery, NY)

COLOMBIA — Idea Radio, **7380** at 2354 with man in SS with ID, frequency info, E-mail and postal addresses. Woman with EE ID at 2351. (Montgomery, PA) 0057 with nice selection of music, EE/SS ID and address info. (D'Angelo, PA)

CONGO — Radio Congo, **5985** at 2240 with continuous local music. Best signal in years. Brazzaville mentioned and suddenly off at 2301. Back on a minute later with "Radio Congo" ID. WYFR signed on just at 2300. (Montgomery, PA) 2145-2212 with highlife vocals, long FF talks about their president, various African countries, ID at 2200. Good with some WYFR QRM from 2200. (D'Angelo, PA)

CROATIA — Radio Croatia via? plus **//9925** via Julich at 0000 sign-on with IDs and frequency anmts in Croatian, EE and SS. Then Croatian broadcast with presumed news. News in EE started at 0008. (Silvi, OH) **9925** at 0144 in Croatian. (Burrow, WA) 0320 in Croatian beamed to WCNA. (Becker, WA)

CUBA — Radio Havana Cuba, **9820** at 0345. Arnie Coro says you can use an old computer monitor coil as a stealth antenna. (Newbury, NE) Radio Rebelde, **6140** in SS at 1235. (Northrup, MO)

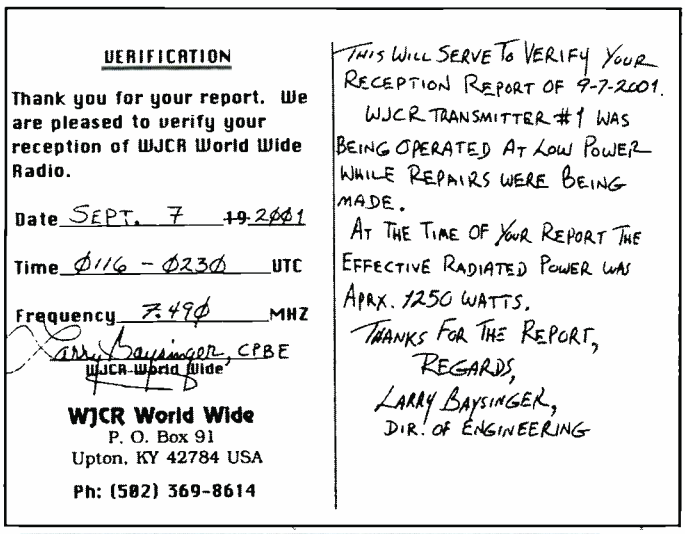
CYPRUS — BBC relay, **15575** with news and correspondent reports at 1405. (Barton, AZ)

CZECH REPUBLIC — Radio Prague, **7345** at 0117 with news and comments. Also **11615** at 0024, **//7345**. Off at 0028. (Newbury, NE) **9870** at 0303. (Burrow, WA) "You are tuned to Prague, the international services of Czech Radio." Off at 0327. (Becker, WA)

DENMARK — Radio Danmark, via Norway, **9945** in DD at 0430. (Brossell, WI)

DOMINICAN REPUBLIC — Radio Barahona, **4930.1** at 0009 with continuous SS music and frequent fades. Tentative as no ID never heard. (Montgomery, PA) Radio Cristal Int'l, **5009.5** at 1030 with religious discussion in "La Voz de Esperanza" program. (D'Angelo, PA)

ECUADOR — La Voz del Napo, **3280** at 0939 with long SS talk by man, local vocals, ID at 1001 followed by religious discussion.



VERIFICATION

Thank you for your report. We are pleased to verify your reception of WJCR World Wide Radio.

Date SEPT. 7 ~~19~~ 2001

Time 0116 - 0230 UTC

Frequency 7.490 MHZ

Larry Baysinger, CPBE
WJCR World Wide

WJCR World Wide
P. O. Box 91
Upton, KY 42784 USA
Ph: (502) 369-8614

THIS WILL SERVE TO VERIFY YOUR RECEPTION REPORT OF 9-7-2001. WJCR TRANSMITTER #1 WAS BEING OPERATED AT LOW POWER WHILE REPAIRS WERE BEING MADE.
AT THE TIME OF YOUR REPORT THE EFFECTIVE RADIATED POWER WAS APRX. 1250 WATTS.
THANKS FOR THE REPORT,
REGARDS,
LARRY BAYSINGER,
DIR. OF ENGINEERING

"Religious broadcaster WJCR in Kentucky was operating on much lower power than normal and QSL'd the fact to Rich D'Angelo.

(D'Angelo, PA) Radio Oriental, **4781.4** at 1000 with flute music, male vocal, ID and TC at 1002. Nice flute and vocal selections hosted by lively male anncr. (D'Angelo, PA) 1008 with two IDs as part of break from music program. Lively LA music. Promo at 1012 talking about future programs and talk about transmitters and locations. More IDs at 1013 and 1014. (Montgomery, PA) **4960** Radio Federacion, 2335 in unid. language with Ecuadorian music, long talks by man, female with chants and back to Ecuadorian music. (Montgomery, PA) HCJB, **9745** at 0055 with IDC, ID and into DX Party Line, **//11840**. (MacKenzie, CA) 0137 with Ham Radio Today. (Newbury, NE) **15115** in EE at 1250 and **15140** in SS at 1230. (Northrup, MO)

EGYPT — Radio Cairo, **9475** at 0256 with music, volleyball competition report and stamp club. (Burrow, WA) **9900** in AA at 0325. (Becker, WA) **12050** in AA at 1635. (Brossell, WI)

ENGLAND — BBC, **9410** in GG to Europe at 0549. (Becker, WA) **11765** at 0413. (Brossell, WI) **9740** at 1225. (Northrup, MO) Wales Radio International, via Rampisham, **9795** at 0212 with "Gardening Report" and "Celtic Report." (Burrow, WA) United Nations Radio, **17565** in AA at 1842. Off at 1845. (Jeffery, NY)

ETHIOPIA — Radio Fana, **6940** at 0346 with long talk using echo effect. Man and woman anncrs. (Montgomery, PA)

GABON — Africa Number One, **9580** with drama in FF at 2153. (Miller, WA) 0559. (Becker, WA) **15475** with FF rap at 1630. (Brossell, WI)

GERMANY — Deutsche Welle, **6160** *(via Antigua — Ed)* with news items at 0905. (Newbury, NE) **9735** in GG at 0333. (Becker, WA) **13780** with ID, news in GG. (Northrup, MO) DeutschlandRadio, **6005** at 0147 with GG ID during classical music, with long segments of dead air between selections. GG intros. Cuba not on this evening. (Montgomery, PA) Sudwestrundfunk, **7265** at 2139 in GG with tentative ID at 2140 airing pops. (Montgomery, PA)

GREECE — Voice of Greece, **9420** to North America at 0555. (Becker, WA) **11645** at 1838 with international and domestic news to closing at 1859. (Burrow, WA) **11900** in Greek at 1405. (Northrup, MO) **17705** *(via Delano —Ed)* at 1815. (Barton, AZ) VOA relay, **15255** with news at 1615. (Brossell, WI)

GUAM — KTWR — Trans World Radio, **9870** at 1300 with sign on and into CC. (Barton, AZ) Adventist World Radio-KSDA, **11560** with religious program at 1035. **11705** parallel at 1025. (Newbury, NE) **11850** at 1608 with report on hoof and mouth disease, ID and music. (Burrow, WA)

GUATEMALA — Radio Buenas Nuevas, **4800** at 1030 with SS ID. (Becker, WA) 1134. (Miller, WA) 0130 with SS anncr and guitar, ID 0133, long talk, more music with children singing. (Montgomery, PA) Radio Verdad, **4052.5** with music at 2345 tune in. Man introducing next number at 2348. Mostly nice, easy music. ID tentative. (Montgomery, PA)

HAWAII — KWHR, **11565** with sermon at 1245. (Brossell, WI)

HONDURAS — Radio Litoral, **4830** at 0327. Usually on 4832. EE ID by soft-spoken man anncr at 0339 after one very long tune. Ballad style music apparently all from the same CD. (Montgomery, PA) HRMI, **5010** at 0205 in reduced carrier USB. SS religious talks and music, ID as Radio Missiones Internacionales. EE ID at 0328 giving frequencies and address, asking for reports. Back with a good, fairly strong signal. (Alexander, PA)

HUNGARY — Radio Budapest, **9560** at 0106. (Newbury, NE) **9570** at 0232 with "Hungary Today." (Burrow, WA)

INDIA — AIR-Panaji (Goa), **9705** at 2252 with Hindi vocals, 2300 ID by woman in EE, then man with ID and into news. (D'Angelo, PA) **11715** at 2219 to 2230 close. Woman with long EE talk, man with "General Overseas Service" ID prior to sitar music. 2229 with ID, times and frequency anmts. (D'Angelo, PA) AIR — **9705//13605** at 2315 with political commentary, ID, sked, ID and music. (Burrow, WA) **11620** at 0130. (Newbury, NE) 0240. (Brossell, WI) **13605** at 0230. (MacKenzie, CA) **17895** at 1019 with local music, EE ID at end of long tune, talks on life in India, ID at 1049 and 1054. Program listing at 1057. Off at 1100. (Montgomery, PA) AIR-Jaipur, **4905** at 1536 in unid. language. (Miller, WA) AIR-Aligarh, **9650** at 2112 with music program and EE ID at 2118. (Montgomery, PA)

INDONESIA — RRI Kendari, **4000.2** at 1145 with mix of talks and music until SCI at 1159 f/by Jakarta news. (D'Angelo, PA) **1150** with IS at 1201. (Montgomery, PA) RRI Makassar, **4753.3** at 2149 with long talk by man in II to SCI and Jakarta news. (D'Angelo, PA) 1215 with pops. (Barton, AZ) Voice of Indonesia, **9525** in Mandarin Chinese at 1108 with continuous music. Tentative ID at 1128 but heavy QRM from VOA sign-on. **15125** at 1126 in parallel to 15150. (Montgomery, PA) **15125** at 1200 sign-on, SCI f/by man with ID and news in II. (D'Angelo, PA) **15150** at 2006 with international and national news, "Indonesian Wonder" program. (Burrow, WA)

IRAN — VOIRI, **7245** at 1530 with possible anthem, ID, schedule, recitations. (Burrow, WI) **15084** in unid. language at 1605. Also at 0248. (Brossell, WI) **13675** in Farsi at 1340. (MacKenzie, CA)

ISRAEL — Kol Israel, **9390** in HH at 0547. (Becker, WA) **9435//11605** with talk in unid. language at 1900. (Burrow, WA) **11585** in HH at 0240. (Brossell, WI) **11605** in RR at 1855, **//9435**. (MacKenzie, CA) Galei Zahal (Israeli Defence Forces Radio) **6973** USB from 0045 with music and news in HH. Seemed also to be taking phone calls from listeners. (Silvi, OH)

ITALY — RAI Int'l, **9750** at 1942 with music, ID, address at 1945 and more music. (Burrow, WA) **11800** at 0105 with EE news and comment. (Newbury, NE) **15250** in II with pop/rock, ID and bird IS at 1905 to 1907 sign-off. (MacKenzie, CA) Radio Japan/NHK, **6145** *(via Canada —Ed)* with feature items at 0044. (Wilden, IN) **9835** in JJ at 1850, **//11880**. **11665** in JJ at 1910. **13630** in CC at 2340, **//17810**. **17810** at 0000 with ID in CC and into news in EE. **17685** in JJ at 0340, **//5960, 9660, 11870, 11930, 15195, 15325, 17180, 17835,17875**. (MacKenzie, CA) **13630** at 0553. (Newbury, NE) **15325** in JJ at 0329. (Jeffery, NY) **17825//17875** to NA in EE at 0350. (Becker, WA) Radio Tampa, **3925** in JJ at 1230. (Barton, AZ) **3985** at 1225 in JJ. (Becker, WA) **9595** in JJ at 1335. (Northrup, MO)

JORDAN — Radio Jordan **11690** at 1519 with music, ID and news at 1600. (Burrow, WA) 1600 with news, letterbox program, asked for reports for QSL card, EE news at 1630 and variety of AA music, U.S. and local pops. Off at 1731. (Alexander, PA)

KUWAIT — Radio Kuwait, **11675** at 0157 with Koran recitations. (Newbury, NE) 0410 in AA with a huge signal. (Brossell, WI) **11900** at 1920 in EE. ID at 1929 and into Moslem program. (Burrow, WA) **13620** at 1250 in AA. (Northrup, MO) **15495** in AA at 0231. (Jeffery, NY)

LIBERIA — ELWA, **4760** at 2153 with EZL music to ID and sign-off anmts, NA and off at 2201. (D'Angelo, PA)

LIBYA — Radio Jamahiriya/Voice of Africa, **15435** with EE at

2330–2338, 0128–0138. //**17725**. (Alexander, PA) 0132 with man in EE with ID 0133, talks about Islam, ID again at 0135. Language change at 0138. (Montgomery, PA) **15435//17725** at 1804 in AA. EE news headlines at 1917, FF at 1919. (Burrow, WA) **17725** in AA at 1940. (MacKenzie, CA)

LITHUANIA — Radio Vilnius, **9710** at 0930 with EE news, comment, local music, ID. (Alexander, PA) **9875** at 2335 with economic report, ID. (Burrow, WA)

MALAYSIA — Radio Malaysia domestic service, **7295** at 1519 with music, EE ID, news at 1559. (Burrow, WA)

MALI — Radio Mali, **5995** at 2235 music and some FF talk. Great until 2254 when it started to fall apart. (Montgomery, PA)

MALTA — Voice of the Mediterranean, **12060** (via Russia, gld) at 1902 with music, talk and many mentions of Malta. (Burrow, WA)

MAURITANIA — Radio Mauritania, **4845** at 0230 to past 0605. FF talks, some AA pops. (Alexander, PA)

MEXICO — Radio Mil/XEOI, **6010** from 0720 with SS music, woman talks, man with ID and "Hello Baby" and whistle. (Becker, WA) *(He's asking for a lawsuit! —Ed)* Radio Educacion, **6185** with U.S. pops at 0645. (Becker, WA)Radio Mexico Int'l, **9705** in SS at 0150 with news. (Miller, WA) **11770** at 2216 with woman in EE. Easy music, canned ID by man at 2223. Female with another ID at 2224. "Voice of Mexico to the world — Radio Mexico International." (D'Angelo, PA) 2227 in EE. SS at 2231. (Burrow, WA) 0415 with ID "Esta es Radio Mexico Internacional." (Brossell, WI)

MOLDOVA — Voice of Russia via Moldova, **7180** at 0426. Romanov's work in chemistry. (Newbury, NE)

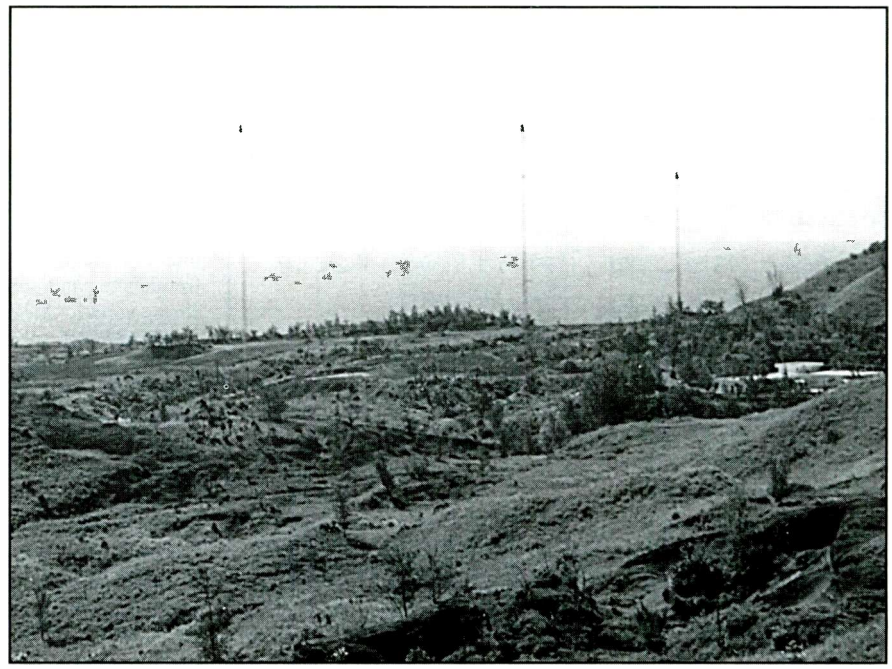
MONACO — Trans World Radio, **9870** at 0735 with EE religious programming. (Alexander, PA)

MONGOLIA — Voice of Mongolia, **12085** at 1030 sign-on. Woman in EE with program anmts, talk features and Mongolian music. (D'Angelo, PA) Sign-on at 1030 with IS, ID by woman, brief anmts, short music, woman with program info. (Montgomery, PA) 1500 with ID, indistinct ID, schedule and then blocked by Syria. (Burrow, WA)

MOROCCO — RTV Marocaine, **11920** at 0159 in AA with local music. (Newbury, NE) VOA relay, **7275** at 0300 with "Daybreak Africa." And **17895** at 1600 with news, "New Dynamic English." (Jeffery, NY)

NAMIBIA — NBC, (presumed) **3270.1** at 0406; woman with EE news from BBC. This appeared to be an Africa feed. Faded slowly after pretty fair reception at tune in. (D'Angelo, PA) **3290** at 0318 with pops and disco, anmts by man and woman in between. Into news at 0400 with "NBC News" mentioned at 0401. Still there are 0440 recheck, but weak. (Lamb, NY)

NEPAL — Radio Nepal, **7164.4** at 1130. Tentative, with man/woman anncrs and a number of tunes. Rapid fades and unable to get an ID at 1215. (Montgomery, PA) 1208 with continuous talks by woman to short instrumental segment prior to time pips, ID and news. (D'Angelo, PA)



These towers belong to Adventist World Radio's KSDA on Guam.

NETHERLANDS — Radio Netherlands, **11655** via Madagascar at 1905 with the "Documentary" program. (MacKenzie, CA)

NETHERLANDS ANTILLES — Radio Netherlands Antigua relay, **6165** at 0131 in unid. language. (Wilden, IN) **21590** at 1900 with classical music. (Jeffery, NY) 2014 with comments and interview. (MacKenzie, CA)

NEW ZEALAND — RNZI, **11675** at 0845 with interview of two actresses from the 1930s. Also **17675** at 0418. (Newbury, NE) **11675** at 0930 with classical music, news at 1000. Switched from here to **15175** at 1005. (Alexander, PA) **17675** at 0228. (Jeffery, NY) 0240 with rugby coverage. (Burrow, WA)

NICARAGUA — Radio Miskut, **5770** at 0021 with long talks. Possible ID at 0027 and local music. (Montgomery, PA) 0047 to 0205 close with continuous romantic vocals, occasional ìMiskutî ID shouted over song intros. (D'Angelo, PA)

NIGERIA — Radio Nigeria, Ibadan, **6050** at 2120 with ID, report on Nigerian Sports Authority, drum music and jingle ID at 2129. Nice site ID at 2130 f/by tribal music. (D'Angelo, PA) Voice of Nigeria, **7255** at 0542 with comments on sponsorship of rugby in Nigeria. (Newbury, NE) News for Western Africa at 0533. (Becker, WA) **15120** at 1906 in FF. (Jeffery, NY) 1920 with Nigerian music, cultural report: "Who Are the Nigerians?" (Burrow, WA) 2017 with EE news, Health Committee interviews, ID 2027. Also at 0457 with woman ID and sign-on after IS and NA. Man with greetings and program preview, time check and news summary. (Montgomery, PA) 2150 with "Celebration" program about a local festival, local music, IDs. "Nigerian Composers" program at 2200. Off at 2302 with short national anthem. //**7255**. Also announced 11770 but not heard. Also noted on **7125//15120** at 0455 sign-on. (Alexander, PA)

NORTH KOREA — Voice of Korea, **6185** in Asian language at 0845. (Barton, AZ) **6575//9335//11710//13760** at 1510 with revolutionary news. (Burrow, WA) **11335** in KK at 2330. Also in EE on **11710** at 1912 (MacKenzie, CA) **13760** at 0000 with anthem, "This is the Voice of Korea — This is the daily transmission from the Democratic People's Republic of Korea. Now the news." (Brossell, WI)

NORTHERN MARIANAS — Radio Free Asia, **15225** at 0151 with talk b a woman in unid. language. Just barely audible. (Jeffery, NY) 15510 in CC at 1920. (MacKenzie, CA)

OMAN — Radio Sultanate of Oman, **15355** with Holy Koran in AA with EE translations of the recitations. (Brossell, WI) 0309 with Koran lesson, "old" western pops, ID at 0329, time pips, news to 0330 then older western pops. (Burrow, WA)

PAKISTAN — Radio Pakistan, **11570** at 1601 with EE news. (Burrow, WA)

PALAU — Radio Free Asia, **13775** in CC at 2320. Jammed, plus QRM from Germany. (MacKenzie, CA)

PAPUA NEW GUINEA — Radio Sanduan, (tentative) **3205** at 1039 with long talks in Pidgin. (Montgomery, PA) Radio Western Highlands, (tentative) **3375** at 1036 with woman in what sounded like mostly Pidgin talks. (Montgomery, PA) NBC, **4890** at 1225 with music. (Miller, WA) Radio New

Ireland, **3905** at 1030 in Pidgin with country/western songs, time check at 1032. (Montgomery, PA)

PARAGUAY — Radio Nacional, **9735** with news in SS at 0235. (Miller, WA)

PERU — Ondas del Rio Mayo, **6797.5** at 0046 with SS music, fast-talking anncr, guitar music. Slightly over modulated. (Montgomery, PA) 1045 with program of rustic vocals hosted by man, ad string at 1058. (D'Angelo, PA) Radiodifusora Huancabamba, **6536** at 0052 with man anncr and ID at 0056. (Montgomery, PA) Radio Altura, **5009.5** at 0959 with children singing "Happy Birthday." Continuous music to ID at 1024. Apparently moved from 3340. (Montgomery, PA) 1008 with continuous OA vocals, full ID by man at 1024: "Desde Cerro de Pasco, Radio Altura." (D'Angelo, PA) Radio Imperio, (tentative) **4389** at 1041 with SS talk. To ranchero music at 1050. (Montgomery, PA) Radio Frecuencia Lider, **4421.2** at 1020 with nice morning program of huaynos and SS man anncr with IDs and TCs. (D'Angelo, PA) **4421.4** at 1035 with continuous music to SS ID by man at 1037, more music. (Montgomery, PA) Radio San Francisco Solano, **4750.1** at 1040. Continuous music with SS ID by man at 1042, back to music. (Montgomery, PA) 1042 with ID and frequency anmt. (D'Angelo, PA) Radio Andina, (tentative) **4995.6** at 1010 with long SS talks and interludes of flute music, then into OA music at 1022. Gone at 1100 recheck. (Montgomery, PA) 1014 with SS talks by woman, OA vocals, ID and TC. (D'Angelo, PA) Voz del Campesino, (tentative) **6956.7** at 0040 with SS music. Off in mid-tune at 0043. (Montgomery, PA) Voz de la Selva, **4824.4** at 1016 with ad string, man with ID, TC. (D'Angelo, PA) 1035. Man in SS with ID at 1038, then what sounded like a commercial. ID again at 1039. Poor modulation. (Montgomery, PA) Radio Paucartambo, (tentative) **6520.2** at 1111. Continuous long SS talk. I made a digital recording and cleaned it up but even then no ID heard. (Montgomery, PA) Radio Ancash, (tentative) **4992.5** at 1026 with woman SS anncr. Very muffled audio and not possible to pick out much. (Montgomery, PA) Radio Huanta 2000, **4746.8** at 1005 with SS talks by man and woman, rustic vocals, ID at 1013. (D'Angelo, PA) Radio Libertad, **5039.2** at 1036 with excited SS talk by man, ID. (D'Angelo, PA) Radio Union, **6301** at 0130 with SS talk and ballads. Usual poor, distorted signal was worse than ever. Formerly **6351**. (Alexander, PA)

PHILIPPINES — Radio Veritas Asia, **11820** at 2320 with comments on Muslims and Islam, woman with ID in Indonesian and EE. (MacKenzie, CA) Radio Pilipinas, **15270** at 0230 with ID, schedule, ID again, news, ID again. (Burrow, WA) FEBC, **15095** with CC talk by man at 1305. (Northrup, MO) VOA relay, **6160** with current events program at 1335. (Barton, AZ) **15410** at 1626. (Brossell, WI) 1636. (Newbury, NE)

PORTUGAL — RDP Int'l, **11655** in PP with orchestral music in background. (Newbury, NE) **21800** with live sports coverage in PP at 2010. **//21540**. (MacKenzie, CA)

PUERTO RICO — AFRTS/AFN, **6458** USB at 0246 with talk, and sports update. (Jeffery, NY)

ROMANIA — Radio Romania, **11775//11940** at 2339 with medical news, ID. (Burrow, WA) **11830** with news at 0420. (Brossell, WI) 0447. Also **15180** at 0626. (Newbury, NE)

RUSSIA — Voice of Russia, **7180** via Moldova at 0315 with mailbag program (Brossell, WI) **15595** at 0400 with news. (Newbury, NE) **17660** at 0123 in unid. language. (Jeffery, NY) **17690** from Petropavlovsk at 0355. (Becker, WA) Radio Magadan, **5940** in RR at 0720. Could hear a word or two under Gene Scott on 5935. (Becker, WA) Radio Rossii, **11840** USB in RR at 0630 from Yzhno-Sakhalinsk. (Becker, WA) Radio Studio, **5920** at 2220 with music, talk in RR by man and woman, numerous IDs and sign off anmts beginning at 2228 until gone at 2230. (D'Angelo, PA)

RWANDA — Radio Rwanda, **6055** at 2055 with music, FF ID and sign off anmts, then EE ID and sign-off "This is Radio Rwanda broadcasting from Kigaliand on shortwave 49 meter band on 6055. We come to the end of today's transmission. We meet again tomorrow at 5:00 AM." (D'Angelo, PA) 2057 in FF, then woman with EE ID with a listing of FM stations and shortwave frequency. Then to talks in FF and NA at 2059. Excellent copy. (Montgomery, PA) Deutsche Welle relay, **15105** in GG at 0143. (Jeffery, NY)

SAO TOME — VOA relay **7265** in FF at 0535. (Becker, WA)

SAUDI ARABIA —BSKSA, **11935** in AA at 1920 and **15230** in AA at 1850. (MacKenzie, CA) 15205 with Holy Koran at 1610. (Brossell, WI) **15275** at 0408 in AA. (Jeffery, NY) **15435** in AA at 1638. (Newbury, NE)

SEYCHELLES — BBC relay, **15420** to Africa at 1630 with sports round up. (Brossell, WI)

SINGAPORE — Radio Singapore, **6150** at 1236 with financial news. (Newbury, NE) 1432 with variety program. (Barton, AZ) 1518 simulcasting local outlet "Perfect 10" — 98.7 FM. (Burrow, WA)

SLOVAKIA — Radio Slovakia, **9440** at 0110 with news by woman. **//5930, 7230**. (Newbury, NE)

SOLOMON ISLANDS — SIBC, **5019.9** at 1221 with BBC Newshour program relay. **5020** at 1150 with discussion program to 5 + 1 time pips at 1200 and into BBC World Service ID and "Newshour." (D'Angelo, PA)

SOUTH AFRICA — Channel Africa, **6035** at 0325 with conversation about South African social conditions. (Newbury, NE) **17770** at 1506 with news, ID. (Burrow, WA) **17870** at 1800 with opening of EE with IS, ID in EE/FF, news of Africa. Language change at 1830. Also **21725** at 1305 with what sounded like Nelson Mandela giving a speech. (Montgomery, PA)

SOUTH KOREA — Radio Korea Int'l, **3955** via England at 2215 with EE news by man and woman. (Montgomery, PA) **9560** via Canada at 0205 with news updates, program on food, "Multiwave Feedback" program. Bill Matthews' DX Report at 0243. **//15575**. (MacKenzie, CA) **9650** *(via Canada — Ed)* at 1133 with news items. (Newbury, NE) **15575** at 0227 "Let's Learn Korean." (Burrow, WA)

SPAIN — REE, **15170** via Costa Rica in SS at 1250. (Brossell, WI) **15385** at 0007 with discussion of Internet schools. (Newbury, NE) **21700** in EE at 2012. (MacKenzie, CA)

SRI LANKA — SLBC, **9770** at 1502 with news, ID at 1506 and 1512. Covered by VOA at 1515. (Burrow, WA) **15425** at 0258 with pops, "This is the Sri Lanka Broadcasting Service. Thank you very much for listening." (Brossell, WI) Radio Free Asia, **15175** in unid. language at 2324. Off at 2330. (Jeffery, NY) VOA relay, **15250** at 0225 with news format. Off at 0300. (D'Angelo, PA)

SWEDEN — Radio Sweden, **9495** in Swedish to Europe at 0554. (Becker, WA) **9495** at 0237. Also 9755 *(via Canada —Ed)* at this hour but a slightly different program. (Burrow, WA) **11895** at 0335. (Newbury, NE)

SWITZERLAND — SRI, **9885** at 0235 with Swiss tourism, Swiss veggie report. (Burrow, WA) 2300–2329 in SS, EE from 2330–2358. Assume this is from South America (Fr.Guiana). (Silvi, OH)

SYRIA — Radio Damascus, **12085//13610** at 2014 with news. ID and into music at 2030. (Burrow, WA)

TAIWAN — Radio Taipei Int'l, 5950 *(via WYFR —Ed)* at 0325 with "Taiwan Economic Journal." (Wilden, IN) **11550** at 1620 with report, then "Taiwan Today." (Burrow, WA) **11985** at 1100 sign-on with ID "This is CBS, Radio Taipei International," s/on anmt for broadcast to East Asia, national anthem and news. (D'Angelo, PA) **15265** at 1440 with mailbag. (Barton, AZ) CBS, **7130** at 1220 with woman talking. (Northrup, MO)

THAILAND — Radio Thailand, **9810** at 1238 with news in EE, Thai culture program. Off suddenly at 1300. (Montgomery, PA) **11850** at 1315 with EE ID. (Barton, AZ) **15395** at 0308. Domestic and international news and sports. (Burrow, WA) VOA relay, **7260** at 1129 with ID and into Asian language program. (Newbury, NE)

TUNISIA — RTT, **7275** with AA music at 0536. (Becker, WA) **12005** in AA at 0427 and **15450** at 1320. (Brossell, WI)

TURKEY — VOT, **6020** (new) at 0400 in EE with news, features, **//7240**. Also new **17815** at 1330–1425 close. (Alexander, PA) **9785** in TT at 1845. (MacKenzie, CA) **9830** at 2330. Off at 2350. (Brossell, WI) **11845** at 2223 with mailbag program. (Burrow, WA) Turkish Meteorological Radio, (tentative) **6900** at 0503 with carrier to top of hour, then music at 0502. Continuous Turkish music, no annor heard. (Montgomery, PA)

TURKMENISTAN — Radio Asgabad, (tentative) **5015** at 0110. Just above the noise floor. Mostly music with man annor at 0115 and female at 0119 with short talk, possible ID by woman at 0119, but not sure. (Montgomery, PA)

UGANDA — Radio Uganda, **4976** at 0316 with EZL music. (Brossell, WI)

UKRAINE — RUI, **7375** at 0400 with EE news, comment, ID, "Ukraine Diary." Weaker on **//7285**. (Alexander, PA) 0443 with soprano-tenor duet, ID, "Hello from Kiev" mailbag program, address, E-mail and web URL. Off at 0459. Announced EE to Europe at 2200–2300 on **5905, 7240, 9560** and 0400–0500 on **7285**. Also 1200–1300 on **11720, 15520**. To Asia: 0100–0200 on **7420, 9610**, same at 0400–0500. Also 1200–1300 on **11825**. To North America: 0100–0200 and 0400–0500 on **7375**. E-mail: vsru@nrcu.gov.ua (Lamb, NY) 12040 at 0313. (Burrow, WA)

UNITED ARAB EMIRATES — UAE Radio, Dubai, **13675** at 0332 with news in EE. (Newbury, NE) **13675//15395** at 1601 with IS, ID, history program. (Burrow, WA) **15395** in AA at 0217. (Jeffery, NY) **17830** at 1845 in EE with AA music. (MacKenzie, WA) UAE Radio, Abu Dhabi, **15315** with Holy Koran in AA at 1624. (Brossell, WI)

UNITED STATES — AFRTS/AFN, Florida, **4278.5** at 1045 with interview program. (Montgomery, PA) WFLA, Florida, internal relay, **25870** at 1325 with garden show, news and ID. (Montgomery, PA) 2005 with "Radio 970" ID. "The west coast of the east coast of the USA." (Montgomery, PA)

UZBEKISTAN — Radio Tashkent, **6025** at 1209 with female and news about Uzbekistan, ID 1218, talk about Islam. **//5975//9715**. (Montgomery, PA) **9545** at 2034 with news, clear ID, music. (Burrow, WA)

VATICAN CITY — Vatican Radio, **7250** in Italian at 0530. (Becker, WA) **12065//13765//15235** at 1551 with comments, ID. (Burrow, WA) **13765** with interview at 1550. (Barton, AZ)

VENEZUELA — Ecos del Torbes, **4980** at 1025 with music, SS. (Barton, AZ)

VIETNAM — VOV *(via Canada —Ed)* at 0235. News with IDs, tape playback problems, ID again at 0239. (Burrow, WA) **9795** via Canada at 0340 with news items. (Newbury, NE)

YEMEN — Rep. Of Yemen Radio, **9779.7** at 0400 with possible ID in what sounded like AA at 0405. RTTY QRM on occasion. Long talks as if news. (Montgomery, PA) **9779.6** at 1757 in EE with IS, anthem, schedule, ID, news, music until news again at 1830. E-mail address and ID at 1858 and back into AA at 1859. (Burrow, WA)

YUGOSLAVIA — Radio Yugoslavia, **11870** at 0430 with IS, ID EE news. (Burrow, WA)

ZANZIBAR (Tanzania) — Voice of Tanzania/Radio Zanzibar, **11734.1** at 1943 with mostly music, five time pips at top of hour and news in Swahili. (Montgomery, PA) 2052 with indigenous vocals and flutes, brief prayer and ID, sign-off anmts prior to short orchestral anthem and off 2101. (D'Angelo, PA)

Let the trumpets sound in salute to the following who checked in this month: Mike Miller, Issaquah, WA; Lee Silvi, Mentor, OH; Stewart MacKenzie, Huntington Beach, CA; Pete Becker, Clarkson, WA; Ed Newbury, Kimball, NE; Robert Montgomery, Levittown, PA; Richard D'Angelo, Wyomissing, PA (Most of Bob and Rich's logs were from a group Dxpedition to French Creek State Park), Robert Brossell, Pewaaukee, WI; Bruce Burrow, Snoqualmie, WA; Dave Jeffery, Niagara Falls, NY; Marie Lamb, Brewerton, NY; Mark Northrup, Gladstone, MO; Rick Barton, Phoenix, AZ and Sue Wilden, Noblesville, IN. Thanks to each one of you.

Until next month, good listening! ■

computer assisted radio monitoring

by Joe Cooper

Getting Connected: Serials Ports, Part I

Over the next two columns I will be looking at one of the simplest, but most troublesome parts of computer assisted radio monitoring. That is establishing a reliable connection between your computer and your monitoring radio. Next to the software that you will be using in your computer, these two methods of connection are the single most common cause of aggravation and difficulty. Because of that I'm going to go over the fundamentals for these connections in full detail in this month's column.

Barring special circumstance for specific radios or computers, the two most common methods used to connect a computer and a radio together into a working partnership is with either a serial port, a computer sound card, or both. A serial port connection is used to directly control the operation of a monitoring radio that has the computer-controlled circuitry installed. A computer sound card takes the audio output from a radio (often from the speaker output) and through the use of a software program either filters it or decodes a signal into an intelligible form, such as text. It is not unusual for both a serial port and a sound card to be used at the same time in one computer in order to give the maximum control of the radio, and the best sound processing/decoding possible. In this particular column I will be looking at the serial port, what it is, and how it is used.

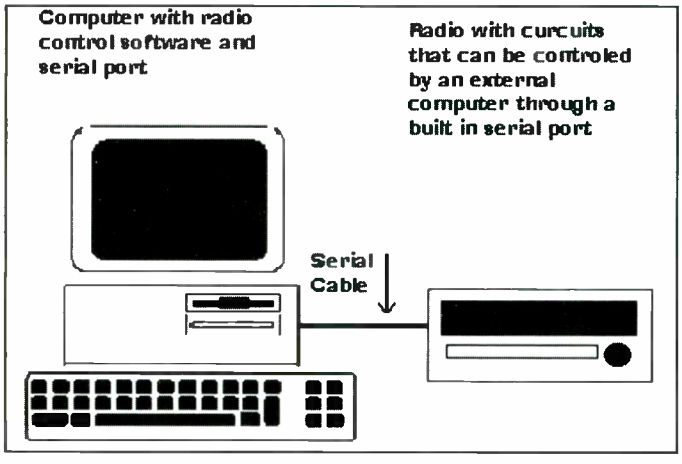
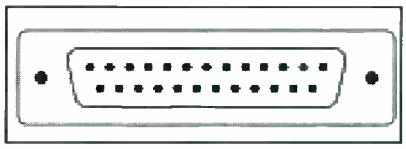


Illustration 1: The serial connection.

The serial port on a computer is one of the many devices called a "peripheral port" because it allows devices outside of the computer (like a printer, a modem, or your monitoring radio) to communicate with the software you are using. You can easily identify a serial port at the back of the computer, as it is a plug comprising either 9 or 25 pins (see illustration 2).

A serial port is designed for devices that don't need to transfer a lot of data, like mice, modems, or monitoring radios. The port is "serial" because data bits are transmitted one at a time, much like the "dits" of Morse code. The international standard for serial ports is called RS-232.

The Electronic Industries Association (EIA) originally adopted RS-232 in 1960. The standard evolved over the years and in 1969 the third revision (RS-232C) was to be the standard of choice of PC makers. Most equipment using RS-232 serial ports use two types of connectors, which are called DB-25 and DB-9. Many PCs today use the DB-9 exclusively since all you need in to communicate between two computer devices is nine signals.



The DB5 serial port. On the female plug, pin 1 is upper far right, and pin 25 is the bottom fsr left. It's reverse for male plug.

The concept behind serial communications is fairly straightforward. Data is transferred from sender (which could be the computer or the monitoring radio) to receiver (which could also be a computer or radio) one bit at a time. This is always done through a single line or circuit. The electronic circuits in a serial port take the information from your computer and convert it as a serial stream of data.

The name serial communications comes from the fact that each bit of information is transferred in series from one location to another. What makes this special in a serial port is that data in your computer and monitoring radio are actually moving through the circuits found there in formations of 8, 16, or 32 bits of parallel information (that information is sent in groups rather that one at a time). The serial port makes the conversion between individual bits of information to groups of information and back again depending whether it is sending or receiving the data.

In theory a serial link would only need two wires, a signal line and a ground, to move the serial signal from one location to another. But in practice this doesn't really work that way as some bits might get lost in the signal, thus altering the ending result. If one bit is missing at the receiving end, all succeeding bits are shifted resulting in incorrect data when converted back to a parallel signal. So to establish reliable serial communications you must overcome these bit errors that can emerge in many different forms.

The most basic way in which a serial port reduces errors is by being given a unique identity so that the right information goes to the right serial port. Serial ports are designated as a COM and then given a specific number identifier which is generally between one to four for most personal computers (though you can install more if you want to).

When you hook up external devices to your computer (such as the monitoring radio) you must be certain of the name of the COM port that you are using. You will need to know this so when you run the software program used to control your monitoring radio you can specify which COM port you are using.

The software will then know where to "look" for the proper COM port in order to send and receive the proper information back and forth between itself and the radio.

Knowing where to look for the COM port is not enough though. When data comes to a serial port from the outside they are first stored in a buffer (like a temporary storage bin) and from there the serial port passes them along to their destination inside your computer so they can be used by the software program you are running. However, this transfer of data occurs only when the serial port's buffer is full. When this happens the serial port signals the computer (through its CPU) to fetch the data by sending an electrical signal known as an interrupt.

TABLE 1: Pin Identification And Use For DB25 And DB9 Serial Connectors

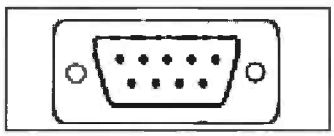
Pin#	Pin #	Name	Name	CCITT	DTE-DCE Formal Name
1	FG	AA	101		Frame Ground
2	3	TD	BA	103	Transmitted Data, TxD
3	2	RD	BB	104	Received Data, RxD
4	7	RTS	CA	105	Request To Send
5	8	CTS	CB	106	Clear To Send
6	6	DSR	CC	107	Data Set Ready
7	5	SG	AB	102	Signal Ground, GND
8	1	DCD	CF	109	Data Carrier Detect
9	—	—	—	—	+P (12 volts positive)
10	—	—	—	—	-P (12 volts negative)
11	unassigned				
12	SDCD	SCF	122	—	Secondary Data Carrier Detect
13	SCTS	SCB	121	—	Secondary Clear To Send
14	STD	SBA	118	—	Secondary Transmitted Data
15	TC	DB	114	—	Transmission Signal Element Timing
16	SRD	SBB	119	—	Secondary Received Data
17	RC	DD	115	—	Receiver Signal Element Timing
18	unassigned				
19	SRTS	SCA	120	—	Secondary Request To Send
20	4	DTR	CD	108.2	Data Terminal Ready
21	SQ	CG	110	—	Signal Quality Detector
22	9	RI	CE	125	Ring Indicator
23	—	CH/CI		111/112	Data Signal Rate Selector
24	—	DA	113	—	Transmitter Signal Element Timing
25	unassigned				

Each interrupt has a number (IRQ) and the serial port must know how to use this signal. For example, a serial port on COM PORT number 1 normally uses IRQ number 4 (see Table 1 for a complete list of IRQ numbers that are normally used in a personal computer). Interrupts are issued whenever the serial port needs to get the CPU's attention. It's important to do this in a timely manner since the buffer inside the serial port can hold only 16 (one in old ports) incoming bytes. If the CPU fails to remove such received bytes promptly, then there will not be any space left for any more incoming bytes and an error will occur, causing loss of data.

Interrupts are also issued when the serial port has just sent out all of the bytes in its small outbound buffer to an outside device, like your monitoring radio. It then has space for more outgoing bytes. The interrupt notifies the CPU of that fact.

The reason why this information is important is that it is used in the configuration, operation and troubleshooting of a serial interface between a computer and a monitoring radio. In a future column I will be looking at specifically how to troubleshoot common connection errors (be it with a serial port or a sound card). You will need to know how to identify the COM port you are using, and the interrupt that it is configured for, in order to repair most common serial port data transfer problems.

Next in importance to the COM port name and interrupt number is the actual wiring of the plug and cable used. Each plug or pin, and the data cables used, must be properly connected in order for the serial port to transfer information properly. Next to improperly configured COM port names and IRQ numbers, a broken or improperly constructed plug or data cable is the most common cause of serial port malfunctions.



The DB9 serial port, on the female plug, pin 1 is upper far right, and pin 9 is the bottom far left. It's the reverse for the male plug.

Each of the pins and plugs in a serial port connector has a number and a name. The starting point in the numbering depends upon whether you are looking at a male (pins) or female (plugs) connector. The numbering for male connectors always starts at the upper left hand corner, then goes to the right along then top row, then goes to the bottom left and goes right to the bottom right hand pin. The numbering for female connectors is the mirror of that, starting in the upper right hand corner, going to the left along the top row, then returning to the bottom right, to finish at the bottom left.

The names of the pins and plugs can be confusing at first, but once you have put everything into groups it is much easier to understand. Pins 2 and 3 on a 25-pin connector, and 3 and 2 on a 9-pin connector, carry the data. Likewise pin 5 in the 25 pin connector, and pin 8 in the 9 pin connector are responsible for the signal that sends the data, while pins 4 and 7 of the same to connectors have the signal that asks if there is data to be sent.

Take a look at the pin assignment table and work out how the transmission of data takes place. When a PC wants to send data it sets the data terminal ready line. This DTR signal goes into the DTR line of the DCE. The DCE recognizes that the DTE is requesting a connection. If an open phone line exist for the DCE, it sets the DSR and data carried detected. When the PC sees the two signals on its DCD and DSR input lines, it sets the request to send line — which says that the PC has data to send to the DCE. If the DCE is clear to accept data, it sets the clear to send line —which tells the PC that the DCE is free to receive, and the PC begins

transmitting data over the TxD line where it is received on the corresponding line on the DCE.

The problem with the RS232 standard is that it assumes that once the communication link was established it would never be broken and that there was no speed mismatch with the two partners. That was once true when computer systems were simpler — but not with what we ask our modern computers to do today. Since most devices — particularly monitoring radios — are much slower in using data than a PC, we have a problem moving data back and forth. This is solved is through what is called "the handshake."

The way to illustrate this is by looking at a personal computer that is connected to a computer-controlled monitoring radio. As said before, the control circuits in the radio are much slower than the circuits in the PC, so you need some way of moving the data without the two devices tripping each other up. When the radio's serial port buffer becomes nearly full, it lowers the DTR line — that is the radio is not ready for any more data. When the PC recognizes this, it stops sending until the computer's serial port buffer is empty and the DTR is set again.

At first we match the send lines with the receive lines on the other device by connecting the RxD on one device with the TxD wires on the other. (This is the minimum request for DTE-DTE). The PC's serial port and the radio's serial port come up with their DTR lines set. Consider the signals as seen by the radio. The PC's DTR line satisfies the radio's DCD and DSR input line requirements.

The radio responds by setting RTS, which in turn satisfies the PC's need for a DCD and DSR signal. The PC also requires its CTS send line to be set before it can transmit, but notice that the radio's DTR is wired to the PC's CTS, so this requirement is satisfied. The PC can now transmit and receive and so can the radio.

Table 2: IBM AT And Compatible IRQs

IRQ # (decimal) Description

0 * System Timers (the clock)
1 * The keyboard (you create an interrupt each time you press a key!)
2 * The "cascade" IRQ (see Using IRQ 2 and IRQ 9)
3 COM2
4 COM1
5 Available
6 Floppy Disk
7 Printer (LPT1)
8 * Real Time Clock
9 Available (see Using IRQ 2 and IRQ 9)
10 Available
11 Available
12 PS/2 Mouse or Available if other mouse is used
13 * Math Coprocessor
14 Hard Disk Drive
15 Available

Note: a "*" indicates the IRQ is NOT available on the system bus for use by an add-in board.

Likewise, you will see that only two COM ports are available — 1 and 2. If you want to have more you must install them and configure them using the IRQs that are marked "available." In future columns I will show you how to do that

In the next column, I will show you how to troubleshoot serial card and cable problems. As a project you will build a serial port loopback plug. You use that to test the flow of serial information in the serial port so that you can actually see the back and forth negotiation between your computer and the peripheral it is connected to. The actual testing is done with a free software package that you can get from the Internet that uses the test device to check the flow of data and signals in a serial

In the same column I will also look at how you can configure individual serial ports using the operating system of your computer in order to ensure that each port has a proper identity (COM number), interrupt (IRQ number), as well as the proper type of handshake set.

Take your time when working with this information as it does take a bit of thought and re-reading to get it mastered. The reward for your persistence will be a solid data connection between your personal computer and compatible monitoring radio that will not let you down. The real reward for all of your work will be the fact that you will not have to think about the connection once you have made it.

If you have any questions, comments, or suggestions about this, and other columns, please E-mail me at ur-review@provcomm.net or send regular mail to: "Computer Assisted" c/o Joe Cooper, PMB 121 1623 Military Rd., Niagara Falls, New York 14304-1745. Please note that I can only answer questions about topics covered in the column. I cannot answer general questions about using computers, computer peripherals, or computer compatible radios. See you next month! ■

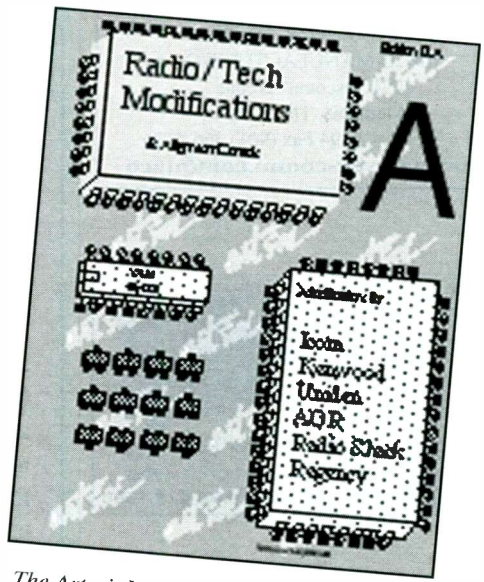
by Harold Ort, Editor

Radio Modifications The ARTSCI Way

Mention the radio word "mods" in virtually any radio group — CB, ham, or scanner — and you're likely to cause more BP readings to go off-scale than a pizza party at a hamfest! Let's face it, people have been modifying radios since day one. The human desire to fix something that works perfectly fine and to get that last drop from the coffee cup is inescapable. My aunt and uncle once bought a brand new color TV — first one in the family to get one — and before the weekend was over, he had "tweaked" it, thereby changing a really good picture to one that was so-so. Not a good week for Uncle Tony! So much for fixing things that don't need fixing.

But there are times when we, as radio nuts, reserve the God-given right — and perhaps, duty — to modify a radio. After all, that's what the radio hobby is all about: experimentation, enjoyment and doing hands-on things — even if it isn't always to the letter of the law (our little disclaimer that modifications will certainly void your warranty and in many cases will violate federal or state laws when the equipment is used on the air or in the reception of prohibited signals) where you live.

I recently received a couple of the latest Artsci Radio/Tech Modifications books — 12A and 14B. (They skipped on a No. 13!) They're the modification wizards headquartered at Artsci, Inc., P.O. Box 1428, Burbank, CA 91507, phone 818-843-4080 or FAX 818-846-2298. For the past 11 or so years Artsci has produced these modification books, and they point out, quite accurately that " . . . each new edition included the information contained in the previous editions, so if you have the current edition, you do not need to purchase the previous ones." So, let's look at both books; one covers mods for ICOM and Kenwood radios, and popular scanners. Edition 14B covers popular CB radios and Yaesu, Ranger, Uniden, Standard, Azden, Alinco, KDK, Ten-Tec, and RadioShack radios. Amateurs, according to Artsci, send in mods and the books are even ordered by the FCC. Why? Artsci says they were told, "They use the books to check confiscated radios to see if they have been modified." Go figure.



The Artsci, Inc. modification books sell for $19.95 plus postage.

Popular Modifications

Before we continue, it shouldn't be necessary to say, but I know it is, because people do strange, stupid things — and all too many people do these strange, stupid things with their radios. You're looking for big trouble if you modify your transceiver to work on police or government frequencies. Talking or calling for help — even in an emergency — on a public safety or government frequency will most certainly get you a hefty fine and perhaps time in the slammer. Don't be dumb.

Removing the ALC circuit on many CBs will yield higher transmit power. This is no secret, so before you write that nasty letter telling me I'm no better than a common knife-wielding criminal, please know that many of these mods have been around and known since many CBs came off the assembly line; ARTSCI has just been thorough enough to offer them in book form. And frankly, they're quite popular — even among hams!

I just counted a total of 34 Cobra CBs that can apparently be modified for higher transmit power, including the popular 148 GTL and 2000 GTL. Now, remember, you're not going to get magnum power from any of these radios, and often the simple modification will only minimally increase your transmit power. Remember too that even a two times increase in power is necessary to yield 3dB increase. If I were inclined to modify my 148 GTL, I'd remove power and the antenna, open the case, locate and remove by desoldering, two parts (one for AM and another for SSB), then reassemble the radio. Frankly, I've never desoldered a small component, although Artsci has a great diagram and instructions for doing so. It looks easy, but personally, I'd practice on an old circuit board ensuring just the right technique was used *before* attempting the real thing!

There are total of 26 Realistic CBs listed that can be modified in the same way. Is yours one? There are dozens also listed for old classic Robyn and Royce CBs and even Trams (Why did I ever sell *that* radio?!)

Ham Radio And Scanner Mods

As mentioned earlier, hams send in the mods, according to Artsci, so it stands to reason there are a multitude of amateur radio mods. I've got a Yaesu FT-3000, and while it would void the warranty, there's a wire that can be cut to give me greatly expanded receive (and transmit). It's a great mod, but again, if

Icom	Icom	Kenwood	Kenwood	Scanners
IC-02AT	IC-1200	TH-21	TH-21	
IC-2A/AT	IC-2000	TH-22	TH-22	AOR-1000
IC-2iA	IC-2330	TH-25	TH-25	AOR-1500
IC-2GAT	IC-2340	TH-26	TH-26	AOR-8000
IC-2GXAT	IC-2350	TH-27	TH-27	
IC-2SA	IC-2400	TH-28	TH-28	**Radio Shack**
IC-2SAT	IC-2410	TH-31	TH-31	PRO-23
IC-2SRA	IC-2500	TM-41	TM-41	PRO-33
IC-3SAT	IC-2700	TH-42	TH-42	PRO-34
IC-04AT	IC-2710	TH-45	TH-45	PRO-37
IC-4GAT	IC-3200	TH-48	TH-48	PRO-39
IC-4iA	IC-3210	TH-55	TH-55	PRO-43
IC-4SAT	IC-3220	TH-75	TH-75	PRO-46
IC-4SRA	IC-3230	TH-77	TH-77	PRO-50
IC-12AT	IC-DELTA1	TH-78	TH-78	PRO-51
IC-12GAT	IC-DELTA 100	TH-79	TH-79	PRO-2004
IC-24	IC-H16	TH-205	TH-205	PRO-2005
IC-25	IC-M600	TH-215	TH-215	PRO-2006
IC-27A/H	IC-M800	TH-235	TH-235	PRO-2021
IC-28A/H	IC-P2AT	TH-315	TH-315	PRO-2022
IC-32AT	IC-P4AT	TH-G71	TH-G71	PRO-2026
IC-38	IC-PCR-1000	TM-221	TM-221	PRO-2027
IC-48	IC-Q7	TM-231	TM-231	PRO-2030
IC-207	IC-R1	TM-241	TM-241	PRO-2032
IC-228	IC-R10	TM-251	TM-251	
IC-229	IC-R100	TM-261	TM-261	**Regency**
IC-281	IC-R7000	TM-321	TM-321	R-1600
IC-290	IC-R71	TM-331	TM-331	R-1600
IC-448	IC-R7100	TM-421	TM-421	R-4030
IC-449	IC-R8500	TM-431	TM-431	
IC-481	IC-RP1220	TM-441	TM-441	

A look at the radios featured in the books.

your particular mod provides expanded transmit, resist the temptation to test it by powering up on the wrong frequency.

One of the most popular scanners ever is the Realistic PRO-2006. There's a very simple mod that Artsci says will restore 800 MHz coverage to this hot scanner. They report that 2006s with serial numbers beginning with 4500 (after new anti-monitoring legislation was enacted in 1994) have a new microprocessor and can't be modified in this manner. Other 800 MHz restorations are available for the PRO-43, 46 and others — all in Edition 12A.

Each Artsci book is $19.95, plus $4 shipping (outside the U.S. it's $10 shipping) from P.O. Box 1428, Burbank, CA 91507. The Artsci, Inc. book extravaganza doesn't stop with these two books by any means. They've got a Lost Users Manuals for $19.95 that has operating instructions for all popular amateur mobiles and HTs, QSL card holders for $7.95 that's a package of two card holders, 20 cards each. Artsci is also on the web at www. Artscipub.com. Be sure to tell them you read about their mod books in *Popular Communications*! They've also got an online version at radiomods.com.

Please let us know what success (or failure!) you've had performing any modifications, not just on radios in these Artsci books, but on other radios as well. We'll print your story and photos and give you an extension to your *Pop'Comm* subscription if your story is printed in the "On-The-Go" column! Good luck — what are you waiting for? ■

Pop'Comm Survey- March 2002

Circle Reader Service #

1. Receiving weather satellite imagery with my shortwave receiver and printing the photos interests me.

Yes. I do this regularly.	1
Yes, but more information would be helpful.	2
No	3

2. I own and regularly use a decoder with my shortwave receiver?

Yes	4
No	5
I might get one if I knew more about this aspect of the hobby.	6

3. I'm a ham and regularly use Packet Radio.

Yes	7
No	8

4. Since becoming a ham I find I spend less time listening to my receivers and more time talking on the bands.

Yes	9
No	10
My radio time is pretty much evenly divided between listening	11
(shortwave, scanners, etc.) and talking on the radio.	12

5. I own a frequency counter and use it at least once a week.

Yes	13
No	14
I think they're too complicated and expensive so don't own one.	
I own one, but have only used it a couple of times in the past month or so.	15

6. Much of my listening is devoted to the following: (Please mark all that are appropriate)

AM Broadcast Band	16
International Shortwave broadcasters	17
Utility stations	18
Amateur stations	19
FM DXing	20
Scanning public safety (police, fire, medical)	21
Scanning civilian aircraft	22
Scanning military aircraft	23
Scanning rail comms	24
Scanning, but a mix of public safety and local/regional commercial activity.	25
Pirate stations	26
Clandestine stations	27

7. I'm interested in an awards program that provides certificates for radio proficiency in verifying - QSLing - a specific number of stations or areas of the world.

Yes	28
No	29
Maybe	30

8. I collect and restore old radios.

Yes	31
No	32
I have in the past, but don't any longer	33

washington beat

Capitol Hill and FCC actions affecting communications

by Laura Quarantiello <lauraq@cts.com>

FCC Creates Homeland Security Policy Council, And Denies Dixon's FRS Channel 1 Petition

The Federal Communications Commission has announced the creation of the Homeland Security Policy Council, an executive level council responsible for coordinating the agency's response to potential terrorist attacks on the nation's telecommunications services, as well as ensuring that public safety, emergency, and defense personnel have access to effective emergency communications during times of crisis. The Council will be directed by FCC Chief of Staff, Marsha MacBride and consist of senior staff members from each of the Commission's bureaus.

FCC Wants Better Access To Telecom

The Federal Bureau of Investigation has asked the major telecommunications companies to help make surveillance of voice communications easier. The request had been formulated well before the Sept. 11 attacks, but that incident has led to renewed interest in the issue. The FBI is concerned about new technology in voice communications, which makes surveillance and wiretapping problematic. Their request was made under the 1994 Communications Assistance to Law Enforcement legislation, which requires phone companies to accommodate police surveillance.

FCC Denies FRS Channel 1 Petition

The FCC has denied a petition to establish Family Radio Service Channel 1 (462.5625 MHz) as a common calling or distress channel. The request, made by **Alan Dixon** and **Robert K. Leef**, stated that FRS does not have a dedicated common channel to be used for calling other FRS stations or asking for help in an emergency. The petition argued that situations will occur in which an FRS user is in an emergency situation with only an FRS radio for communication. In her decision, **FCC Wireless Telecommunications Bureau Chief Kathleen O'Brien Ham** said that "the fundamental requests in this petition are that the Commission (1) establish by rule a calling channel in the FRS so that FRS units can quickly establish ordinary communications with other nearby FRS units, and (2) require manufacturers to include specific features, standards, or operational capabilities in the design of FRS units so that FRS Channel 1 would become a de facto universally recognized calling channel as new FRS units are purchased . . . We disagree with the petitioners that additional FRS transmitter technical or operational rules are needed . . . we **do not believe** that establishing FRS Channel 1 as a universally recognized common calling channel is necessary or **consistent with the purpose of the FRS**."

Nextel Proposes Frequency Swap To Aid Public Safety

Nextel Communications has proposing a swap of wireless airwaves designed to eliminate the ongoing problem with interference that has disrupted radio communications for dozens of police and fire departments across the country. The plan must still be approved by the Federal Communications Commission, which insiders say, will be under pressure to approve it. Heavy cellular phone use following the Sept. 11 terrorist attacks interfered with some public safety transmissions. The interference was due to interlacing of public safety, Nextel and other mobile radio frequencies. Under the proposed plan, Nextel and public safety radio services would trade frequencies, giving police and fire their own block of contiguous spectrum. Public safety services would also gain 10.5 MHz of spectrum from Nextel, as well as be given up to $500 million to help defray radio reprogramming and equipment costs. In return, Nextel would receive 10 Mhz of spectrum in a new band currently slated for use by satellite-based phone services. It remains to be seen if the new band would have enough room for both Nextel and other services to operate.

CB Operator Cited

Crime really doesnít pay. Just ask **Klaus D. Kramer**. He got snagged for "willful & repeated violations of Section 301 of the Communications Act of 1934." In plain English, Kramer was allegedly operating a radio station on CB frequencies without Commission authorization and using excessive power. After receiving complaints from CB users in the area, FCC Enforcement Bureau agents in Oklahoma used direction-finding equipment to trace high power transmissions on CB Channel 19 to Mike's Cycle Shop in Oklahoma City, where they found Kramer's unlawful station. Kramer admitted making the transmissions, voluntarily relinquished his equipment, and said he would discontinue operating the station. Unfortunately, he was lying. Agents continued to monitor unlawful high power transmissions from Kramer's business and came knocking twice to remind him he was committing a violation of FCC rules. Each time, Kramer voluntarily gave up his radios and pledged not to do wrong again. In July of 2001, the FCC's Dallas, Texas, Field Office issued a Notice of Apparent Liability for Forfeiture in the amount of **$9,500** for willful and repeated violations of Section 301 of the Communications Act of 1934, as amended. In his response, Kramer whined about the amount being excessive, but the

Commission had had enough of this particular violator; they said "pay up."

Kenwood Asks For Rule Change

Kenwood has petitioned the FCC to allow a change in amateur rules that would permit remote station control using the 2-meter band. The rules currently allow auxiliary operation on frequencies above 222.15 MHz. Kenwood's SKY COMMAND remote controller operates on 440 MHz and 144 MHz. The 440 MHz operation is not legal under the current rules. The FCC turned down Kenwood's initial petition for waiver on this matter, but agreed that the company could apply again to change the rules. (FCC RM-10313)

FCC Reacts To November Terrorist Scare

In late November of 2001, the FCC halted mail deliveries to its Gettysburg office due to concerns over possible anthrax contamination. The move has delayed the processing of vanity callsign applications and some license renewals. The Gettysburg office has instituted new mail handling procedures to protect the health of employees and operations should be back in full swing by the time you read this.

Hollingsworth Scolds Amateurs

Reacting to what he calls a "who's on first" dispute, FCC enforcement chief Riley Hollingsworth has told a group of amateurs to "exercise a little more flexibility and courtesy" regarding a dispute over interference. Two groups of amateurs are engaged in a dispute over three 75-meter nets; one group claims the other group is intentionally interfering with them, saying they claim to own the frequencies. Hollingsworth sent a letter to both groups advising them to work things out and not to violate FCC rules. "It is regrettable that the parties cannot solve it, and it is unreasonable to ask that the Commission use scarce enforcement resources to do so." In other words, play nice, guys.

ARRL: Novice Bands May Not Be Needed

As we go to press we learn that an ARRL study group has recommended approaching the FCC about ditching the current novice bands and breaking them up among the various other license classes. They also want changes in the amateur rules that will allow Novice and Technician licensees with Element 1 credit to be permitted to operate Morse code on the General 80, 40, 15 and 10 meter CW allocations at up to 200 watts power output.

The report will be presented to the ARRL's Board of Directors. The committee also suggests recognizing portions of the 80, 40, 15 and 10 meter Morse bands for what it calls "slow CW operation." They say that doing so would help new ops in enhancing their Morse code skills. Stay tuned to this hot-potato issue which we'll be reporting on as events unfold. ■

clandestine communiqué

tuning in to anti-government radio

by Gerry L. Dexter

Listening For The Army's Psyops Afghan Broadcasts

These are interesting, exciting times for clandestine hunters and even DXers who don't specialize in radio intrigue. As you probably know, the U.S. Army's psychological operations "psyops" people have put a station on the air aimed at the people of Afghanistan. (Earlier airdrops had put thousands of wind-up radios on the ground.) The shortwave broadcasts are on the unusual frequency of **8700** upper sideband. There are two medium wave frequencies in use as well — **864 and 1107 kHz**). Programming is in the local Pashtu and Dari languages from 0030 to 0530 and 1230 to 1700 UTC. It seems, however, that the 0030 broadcast now lasts a considerably shorter time than the official schedule indicates. The broadcasts, going out under the name "Information Radio" (how many three MGD lunches did it take to come up with such a clever name?) attempts to assure Afghan civilians that they are not targets in the war and urge them to stay in their homes and away from military targets. The shortwave broadcasts are being widely heard by U.S. listeners although the signal suffers from a great deal of noise and what may be intentional jamming from an unknown source.

The broadcasts (at least the medium wave signals) are "aired" from a C-130 aircraft, especially outfitted for the job and dubbed "Commander Solo." The 193rd Special Operations Wing ("Never Seen, Always Heard") based at Pennsylvania Air National Guard, operates them. Some are wondering if the shortwave transmissions are actually coming from the aircraft and are suggesting other locations — perhaps the VOA site in Sri Lanka, the U.S. military installation at Diego Garcia, some newly established base in Tajikistan, or maybe within the territory controlled by the Northern Alliance? The planes can even do color TV broadcasting and have seen duty over Haiti, Panama, Bosnia/Kosovo, and during the Gulf War.

The broadcasts have created any number of other questions, so far unanswered. Why the odd frequency? Did someone misstype 7080 the official frequency of the Taliban's station? Why upper sideband when any civilian listeners in the target area are not likely to have access to radios with sideband capabilities? Is this some kind of feeder? Who is doing the jamming — if it is in fact, jamming — and where's it coming from?

As for hearing this one, be prepared for a real jousting match. The more ability your receiver has to "slice and dice" the better chance you have at pulling out a readable signal. It's not going to jump out and slap you in the face like WYFR! Reception reports are not wanted at this time.

We can, in fact, expect more radio action on this front. The Northern Alliance plans to get on the air with high-power broadcasts over a number of transmitters, though there's no certainty at this point that any will be on shortwave. The programming will also include broadcasts from the BBC and VOA.

The half clandestine, half pirate United Patriot Radio is now neither one. Operator Steve Anderson was pulled over by a sheriff's deputy last October because he had a broken taillight on his pickup truck. After checking his ID, the officer was about to let him go with a warning when the cop spotted a couple of gun clips. When the officer asked Anderson about them, Anderson pulled out a rifle and began firing at the deputy's patrol car. The officer took cover behind the patrol car. By the time back up help arrived Anderson had driven into the mountains. His pickup was found abandoned. Anderson had vanished. And so has United Patriot Radio.

A couple of quick notes before we conclude. **Radio Free Vietnam** has left **15235** and now uses **11850** at its normal 1400–1430 times, all in Vietnamese.

The Cambodian clandestine **Voice of Justice** can be reached at 49, Street 214, Phnom Penh, Cambodia.

The Voice of Biafra continues to broadcast on Saturdays only from 1900–2000 on **12125**. The broadcasts are produced in Washington, D.C.

That ties up the package for this time. Remember, your informational input is always most welcome, whether logs, schedules, addresses, or background information.

Thanks for your continued interest and support. Until next month, good hunting! ■

Tap into *secret* Shortwave Signals

Turn mysterious signals into exciting text messages with the MFJ MultiReader™!

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

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

You'll *read* interesting commercial, military, diplomatic, weather, aeronautical, maritime and amateur traffic . . .

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

-- all over the world -- Australia, Russia, Japan, etc.

MFJ-462B **$179.95**

Printer Monitors 24 Hours a Day

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

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

MFJ *MessageSaver*™

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

High Performance Modem

MFJ's high performance *PhaseLockLoop*™ 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 brushed aluminum 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, $14.95. 5¼Wx2½Hx5¼D inches.

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

Try it for 30 Days

If you're not completely satisfied, simply return it within 30 days for a prompt and courteous refund (less shipping). Customer must retain dated proof-of-purchase direct from MFJ.

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-30 MHz.

MFJ-1024 **$139.95**

Receives strong, clear signals from all over the world. 20 dB attenuator, gain control, ON LED. Switch two receivers and auxilary or active antenna. 6x3x5 inches. Remote has 54 inch whip, 50 feet coax. 3x2x4 inches. 12 VDC or 110 VAC with MFJ-1312, $14.95.

Indoor Active Antenna

MFJ-1020B **$79.95**

Rival outside long wires with this *tuned* indoor active antenna. *"World Radio TV Handbook"* says MFJ-1020B 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 a preselector with external antenna. Covers 0.3-30 MHz. 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, $14.95.

Compact Active Antenna

MFJ-1022 **$49.95**

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

Detachable 20 inch telescoping antenna. 9 volt battery or 110 VAC MFJ-1312B, $14.95. 3⅛x1¼x4 in.

Eliminate power line noise!

MFJ-1026 **$179.95**

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. Select 2 antennas and 2 receivers. 1.6-30 MHz. 9x2x6 in. Use 9-18 VDC or 110 VAC with MFJ-1312, $14.95.

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 **$99.95**

High-gain, high-Q receiver preseletor 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. Push buttons let you select 2 antennas and 2 receivers. Dual coax and phono connectors. Use 9-18 VDC or 110 VAC with MFJ-1312, $14.95.

CW, RTTY, ASCII Interface

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. Frequency manager lists over 900 FAX stations. Auto picture saver.

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

High-Q Passive Preselector

MFJ-956 **$49.95**

High-Q passive LC preselector boosts your favorite stations while rejecting images, intermod and phantom signals. 1.5-30 MHz. Preselector bypass and receiver grounded positions. Tiny 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 attenuation and very low passband loss. Air variable capacitor with vernier. 1.6-33 MHz.

Easy-Up Antennas

MFJ-38 **$16.95**

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 Antenna Switches

MFJ-1704 **$64.95**

MFJ-1702C **$24.95**

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. Good to 500 MHz. 60 dB isolation at 30 MHz. **MFJ-1702C** for 2 antennas.

World Band Radio Kit

MFJ-8100K **$69.95** *kit*
MFJ-8100W **$89.95** *wired*

Build this regenerative shortwave receiver kit and listen to signals from all over the world with just a 10 foot wire antenna. Has RF stage, vernier reduction drive, smooth regeneration, five bands.

21 Band World Receiver

MFJ-8121 **$39.95**

MFJ's new 21 Band World Receiver lets you travel the world from your armchair! Listen to BBC news from London, live music from Paris, soccer matches from Germany and more! Covers 21 bands including FM, Medium Wave, Long Wave and Shortwave. *Sony*® integrated circuit from Japan, multicolored tuning dial, built-in telescopic antenna, permanent silkscreened world time zone, frequency charts on back panel. Carrying handle. Operates on four "AA"s. Super compact size!

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world band tuning tips

your monthly international radio map

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	3280	La Voz del Napo, Ecuador	SS
0000	9560	Radio Ukraine Int'l	
0000	7375	Radio Ukraine Int'l	
0000	17815	Voice of Turkey	
0000	6020	Voice of Turkey	
0000	5010	Solomon Is. Broadcasting Corp.	
0000	7275	RTT Tunisia	AA
0000	4976	Radio Uganda	
0000	17675	Radio New Zealand Int'l	
0030	15450	RTT Tunisia	AA
0030	7260	VOA relay, Thailand	
0100	11815	Radio Thailand	unid.
0100	15395	Radio Thailand	
0100	13610	Radio Damascus, Syria	
0100	5950	Radio Taipei Int'l, via WYFR, Florida	
0130	11940	Radio Romania Int'l	
0130	6150	Radio Singapore	
0130	15385	Radio Exterior de Espana	
0130	15575	Radio Korea Int'l, S. Korea	
0130	11550	Radio Taipei Int'l, Taiwan	
0130	7130	Central Broadcasting System, Taiwan	
0130	4200	Voice of the Worker, via Turkmenistan	unid
0130	15250	Voice of America via Sri Lanka	
0130	9650	Radio Korea Int'l, South Korea	
0200	11575	Radio Free Asia, USA, via Russia	
0200	9560	Radio Korea Int'l, via Canada	
0200	9495	Radio Sweden	
0200	15425	Sri Lanka Broadcasting Service	
0200	15175	Radio Free Asia, USA, via Sri Lanka	unid
0200	9440	Radio Slovakia	
0230	17870	Channel Africa, South Africa	
0230	17770	Channel Africa, South Africa	
0230	15230	Broadcasting Service of Kingdom of Saudi Arabia	AA
0230	7265	Voice of America via Sao Tome	
0230	15420	BBC, via Seychelles Is.	
0230	15105	Deutsche Welle, Germany, via Rwanda	GG
0230	11840	Radio Rossii, Russia	RR
0230	9540	Magadan Radio, Russia	RR
0230	7180	Voice of Russia, via Moldova	
0230	11510	Radio Free Asia, USA, via Russia	CC
0230	21800	RDP Int'l, Portugal	PP
0230	11820	Radio Veritas Asia, Philippines	

UTC	Freq.	Station/Country	Notes
0245	6301	Radio Union, Peru	SS
0300	15095	Far East Broadcasting Co., Philippines	CC
0300	15120	Voice of Nigeria	
0300	7250	Vatican Radio	
0300	9715	Radio Tashkent, Uzbekistan	
0300	13765	Vatican Radio	
0300	15315	UAE Radio, Abu Dhabi	AA
0300	17830	UAE Radio, Dubai	
0300	6035	Channel Africa, South Africa	
0300	4278.5	AFRTS/AFN, Florida	USB
0300	17660	Voice of Russia	
0300	6458	AFRTS/AFN Puerto Rico	USB
0300	11570	Radio Pakistan	
0330	5009	Radio Altura, Peru	SS
0330	17895	Voice of America via Morocco	
0330	11920	RTV Marocaine, Morocco	AA
0330	9745	HCJB, Ecuador	
0400	6265	Central Broadcasting System, Taiwan	CC
0400	9830	Voice of Turkey	
0400	13670	Voice of Korea, North Korea	
0400	17660	Swiss Radio Int'l, via French Guiana	
0400	11655	RDP Int'l, Portugal	PP
0400	15275	Broadcasting Service of the Kingdom of Saudi Arabia	AA
0400	9875	Radio Vilnius, Lithuania	
0400	6165	Radio Netherlands via Antigua, NWI	DD
0400	7295	Radio Malaysia	
0400	7164	Radio Nepal	unid
0430	4996	Radio Andina, Peru	SS
0430	6797	Ondas del Rio Mayo, Peru	SS
0430	13775	Radio Free Asia, USA, via Palau	CC
0500	3205	Radio Sanduan, Papua New Guinea	Pidgin
0500	5770	Radio Miskut, Nicaragua	SS
0530	9525	Voice of Vietnam, via Canada	
0530	15270	Radio Pilipinas, Philippines	
0530	11734	Radio Tanzania-Zanzibar	Swahili
0530	11710	Voice of Korea, North Korea	
0530	7255	Voice of Nigeria	
0530	4980	Ecos del Torbes, Venezuela	SS
0530	12065	Vatican Radio	
0600	12085	Voice of Mongolia	
0600	11870	Radio Yugoslavia	
0600	4890	NBC, Papua New guinea	

UTC	Freq.	Station/Country	Notes
0600	3375	Radio Western Highlands	Pidgin
0630	9737	Radio Nacional, Paraguay	SS
0700	9945	Radio Danmark, via Norway	DD
0700	15225	Radio Free Asia, USA, via No. Marianas	unid
0700	15355	Radio Sultanate of Oman	
0730	21590	Radio Netherlands, via Bonaire, NWI	
0930	15140	Radio Free Europe/ Radio Liberty, via Morocco	unid
0930	9870	Trans World Radio, Monaco	
1000	9780	Republic of Yemen Radio	AA
1000	15495	Radio Kuwait	AA
1000	15435	Voice of Africa/Radio Jamahiriya, Libya	AA/EE
1030	11770	Radio Mexico Int'l	SS
1030	6185	Radio Educaccion, Mexico	SS
1030	6010	Radio Mil, Mexico	SS
1030	9710	Radio Vilnius, Lithuania	
1030	4845	Radio Mauritania	AA
1030	11990	Radio Kuwait	
1100	3925	Radio Tampa, Japan	JJ
1100	12060	Voice of the Mediterranean, Malta, via Russia	
1100	4760	ELWA, Liberia	
1100	13630	Radio Japan	
1130	17810	Radio Japan	
1130	4753	Radio Republik Indonesia, Makassar	II
1130	4000	Radio Republik Indonesia, Kendari	II
1130	9705	All India Radio, Panaji	
1145	11800	RAI Int'l, Italy	II
1200	9390	Kol Israel	HH
1200	11620	All India Radio	
1200	13605	All India Radio	
1200	5010	Radio Misiones Int'l, Honduras	SS/EE
1200	11565	KWHR, Hawaii	
1200	4052.5	Radio Verdad, Guatemala	SS
1200	4800	Radio Buenas Nuevas, Guatemala	SS
1200	11560	KSDA -Adventist World Radio, Guam	
1200	15255	Voice of America relay, Greece	
1230	9570	Radio Budapest, Hungary	
1230	4830	Radio Litoral, Honduras	SS
1230	17705	Voice of Greece, via USA	Greek
1230	7265	Sudwestrundfunk, Germany	GG
1245	15475	Africa Number One, Gabon	FF
1245	11645	Voice of Greece	
1300	9735	Deutsche Welle, Germany	GG
1300	9925	Croatian Radio, via Germany	Croatian
1300	4960	Radio Federacion, Ecuador	SS
1300	9580	Africa Number One, Gabon	FF
1300	6940	Radio Fana, Ethiopia	unid
1300	17565	United Nations Radio, via England	AA
1330	11765	BBC via South Africa	
1400	9730	China Radio Int'l, via French Guiana	
1400	12050	Radio Cairo, Egypt	AA
1500	9410	BBC	GG
1500	9900	Radio Cairo, Egypt	AA
1530	4782	Radio Oriental, Ecuador	SS
1530	4930	Radio Barahona, Dominican Republic	SS
1600	9870	Radio Prague, Czech Republic	
1600	15575	BBC, via Cyprus	
1600	11615	Radio Prague, Czech Republic	
1600	11765	KNLS, Alaska	
1600	15125	Voice of Indonesia	
1600	15085	Voice of Islamic Republic of Iran	Farsi
1600	9870	KTWR — Trans World Radio, Guam	CC
1630	15250	RAI Int'l, Italy	II
1630	11850	KSDA Adventist World Radio, Guam	
1630	11970	Voice of Islamic Republic of Iran	
1630	3270	Namibian Broadcasting Corp.	
1630	15150	Voice of Indonesia	
1800	11690	Radio Jordan	
1800	3905	Radio New Ireland, Papua New Guinea	Pidgin
1800	11800	Radio Free Asia, USA No. Marianas	CC
1830	9555	Radio Liberty, USA, via Morocco	RR
1830	9525	Voice of Indonesia	
1830	11655	Kol Israel	RR
1830	9795	Wales Radio Int'l, via England	
1830	6973	Galei Zahal (Israeli Defense Forces) Israel	HH
1830	4820	Radio Botswana	
1830	5009.5	Radio Cristal Int'l, Dominican Republic	SS
1900	15260	China Radio Int'l	CC
1900	5984	Radio Congo	FF
1900	13650	China Radio Int'l, via Cuba	CC
1900	6140	Radio Rebelde, Cuba	SS
1900	7380	Idea Radio, Colombia	
1900	11765	China Radio Int'l	
1900	11700	Radio Bulgaria	
1930	13655	Radio Canada Int'l	FF
2000	7400	Radio Bulgaria	
2000	6180	Radio Nacional Amazonia, Brazil	PP
2000	9860	Radio Vlaanderan Int'l, Belgium	
2000	6105	Radio Cultura Filadelfia, Brazil	PP
2000	11900	Radio Bulgaria	
2030	4815	Radio Difusora Londrina, Brazil	PP
2100	13710	Voice of America relay, Botswana	
2130	4716	Radio Yura, Bolivia	SS
2200	11650	Radio Australia	
2200	15476	Radio Nacional San Gabriel, Antarctica	SS
2230	13730	Radio Austria Int'l	GG
2300	21550	Voice International (Christian Voice) Australia	
2300	7210	Radio Minsk, Belorussia	
2300	17580	Voice of America, via Ascension Is.	
2300	15240	Radio Australia	
2300	9580	Radio Australia	
2300	9870	Radio Austria Int'l	
2300	6115	Radio Tirana, Albania	
2300	9960	Voice of Armenia	
2300	15345	Radiodifusora Argentina al Exterior	SS
2300	20276	Radio Continental, Argentina (relay feed)	SS/USB
2330	15160	RTV Algerienne, Algeria	unid
2330	4800	Radio Lesotho	
2330	4830	Radio Tachira, Venezuela	SS
2330	4915	Ghana Broadcasting Corp.	
2330	4940	Radio Amazonas, Venezuela	SS
2330	4991	Radio Apinte, Surinam	unid
2330	6100	Radio Liberia Int'l	
2345	6070	CFRX relay CFRB Toronto	
2345	7125	RTV Guinea	FF
2345	7200	Radio Omdurman, Sudan	AA
2345	7240	Trans World Radio, Swaziland	unid.

power up: radios & high-tech gear

by Harold Ort

review of new, interesting and useful products

New Repeater MapBook™ From Artsci

Artsci Inc (Artsci Publishing) is proud to announce their newest Repeater MapBook, 10th edition. Artsci's Repeater MapBook is packed full of Open Repeater Data from all over North America, updated on their Open Repeater Database on the world wide web at http://www.artscipub.com/repeaters/. This volume of the Repeater MapBook continues the tradition of the Detailed Grid Square, NOAA weather frequencies, Band & Mode Charts, and of course everyone's favorite Bob Simpleton's Guides are covered in the Repeater MapBook. Bill Smith, N6MQS says "The Repeater MapBook makes the best traveling companion for when you are on the road." Listings of cities, towns and highways and byways the Repeater MapBook leads you to the open repeater you can use.

Artsci's new Repeater MapBook™ is a great mobile traveling companion for under $10.

Over 180 pages of data Repeater MapBook is only $9.95 and is available at your favorite ham radio dealer or on the Web at http://www.artscipub.com or by phone 818-843-4080.

New Cleaner Stops Oxidation For Silver And Gold Contacts

Rawn America's new EcoClean® eliminates the number one cause of electrical failure in high-tech components and precious metal contacts: oxidation and dirty connections. In many instances, because of microcrystalline contamination, the poor connective qualities are not even visible to the naked eye. This misleads repair work into high cost troubleshooting and component replacement where a 30-second cleaning with less than a nickel's worth of chemical would fix the problem.

The new formulation goes far beyond the conventional silver and gold cleaners of the past used for jewelry. It has been specially engineered to effectively remove oxidation and tarnish as well as grease, oils, and micro-contaminants from delicate metal contacts of silver and gold commonly used in electrical and electronic equipment. As it cleans, the new product forms a special monomolecular VpCI™ protective film that inhibits further oxidation. The patented VpCI™ technology migrates to both the immediate metal surface as well as into crevices and cracks in the metal to provide complete protection during minute flexing of contacts and boards. This unique feature is especially important to miniaturized electronic components where minute flexing allows microcrystalline attack to gain its initial foothold in deteriorating micro-electrical circuits.

Using new chemical, EcoClean® Silver and Gold Cleaner is biodegradable and non-toxic. It is free of harsh abrasives and toxic chemicals to make the product friendly to workers and the environment. To use, the worker simply applies with a sponge or chamois swab, gently cleaning the contact. When done, just wipe with a soft, dry cloth.

Rawn America™ Brand is manufactured by Corec® Spray Technologies Division located in Spooner, Wisconsin. They manufacture a variety of compressed air-powered, aerosol and related products for the MRO, electronic, telecommunications, electrical, industrial, and process industries.

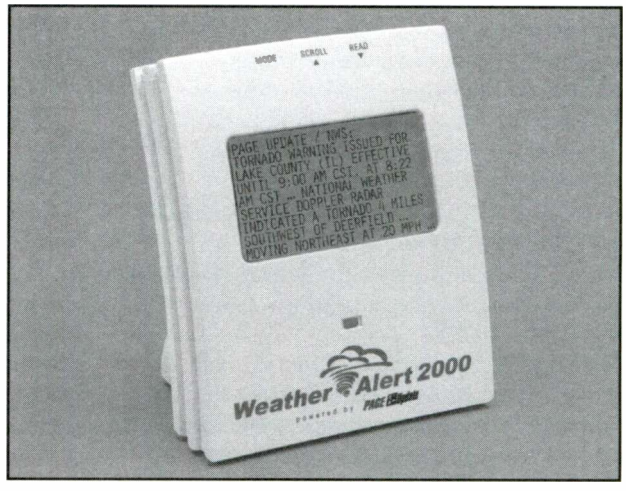
For more information contact Oleh Artym at 651-429-1100, ext. 179 or online at oleh@cortecvci.com. Tell him you read about their EcoClean® product in *Popular Communications*.

Weather Alert® 2000 Is First Personal Digital Emergency Warning Receiver

A new personal emergency warning technology has been introduced to notify Americans about the ongoing terrorism attacks against the United States as well as alert them to imminent local weather emergencies.

Weather Alert® 2000 is the nation's first digital receiver for weather warnings and civil emergency messages. It is considered as the "next generation" in NOAA Weather Radio, using a combination of satellite and 900 MHz Flex® technology that offers numerous advantages over current analog weather radios.

"In less than 90 seconds, it broadcasts any urgent watches and warnings from the National Weather Service and emergency messages from the U.S. Emergency Alert System," stated Mike Harris of Page Update, Inc., the national wireless data service



A look at the new high-tech digital Weather Alert® 2000.

that just launched Weather Alert 2000. "We also distribute urgent bulletins from our own operations center, which includes input from emergency management officials from across the U.S. It is the only national early-warning system of its kind."

Residential users as well as schools, hospitals, and businesses will now have instant access to real-time, localized severe weather alerts. These include tornado, hurricane, flash flood, thunderstorm, and winter storm warnings.

National alerts, advisories, and civil emergency messages might include warnings about the anthrax and related terrorism attacks against the U.S. Other localized incidents involving hazardous materials, fires and explosions, and related technological and air-quality emergencies affecting public health and safety also are disseminated.

The receiver is a compact (4" high by 3 1/2" wide by 1 1/2î deep) self-contained desktop unit with an AC power adapter and battery back-up; operated on its included four AAA batteries, it is also portable. Subscribers pay $9.95 monthly for the 24/7 Page Update monitoring service; Weather Alert 2000 sells for $129.95 suggested retail.

Users can program the Weather Alert 2000 for up to 16 different counties across the country. This enables keeping track of a home location, nearby counties where bad weather originates, business locations, a vacation home, and travel destinations as well as the homes of distant family members, relatives, and friends.

Upon receiving a warning, Weather Alert 2000 sounds a very loud 85 dB alert tone for 30 seconds and flashes a high-intensity red LED indicator. It features an eight-line display on an oversized, backlit LCD screen for the message text with an alert time stamp and a large digital clock with alarm.

Owners of alphanumeric pagers, cell phones, PDAs and other wireless devices also can subscribe to the Page Update alerting system. For more information contact Jesse Rotman at The Rooster Group, phone 847-948-5948 or FAX 847-948-5941. You can also E-mail him at Roosters@aol.com.

Alinco Introduces DJ-X3 Scanning Receiver — Compact Design Features "Hidden" Speaker

Alinco announces the release and FCC type-acceptance of its new DJ-X3 scanning receiver, a compact unit that can receive from 100 kHz to 1.3 GHz in AM and wide or narrow FM modes. Announcement of the new unit was made by Craig Cota of ATOC Amateur Distributing, which distributes Alinco products to dealers in the USA and Canada.

The DJ-X3 has a very distinctive design that places the speaker behind the display. Audio is heard from ports on either side of the display window. The compact unit easily fits in a shirt or jacket pocket. The DJ-X3 features 700 memory channels (10 banks of 70 channels), is powered by a rechargeable Ni-MH battery and also comes with a dry cell (3 X AA) battery pack.

(Continued on page 74)

by Bruce Conti <baconti@aol.com>

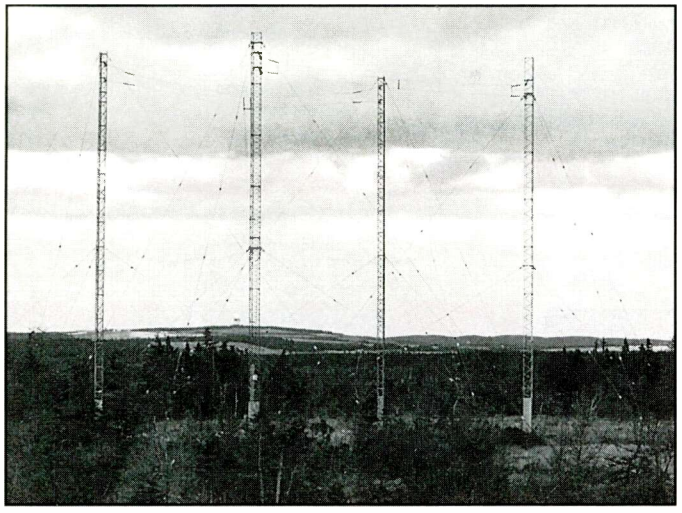
DXPedition Honors The First DXer

On December 12, 1901, at a site in Newfoundland, Canada, Guglielmo Marconi received the first transatlantic radio signal in history. The letter S in Morse code was sent by a spark gap transmitter from Poldhu, England, and received by Marconi at the top of Signal Hill overlooking St. John's harbor and the open Atlantic Ocean. Thus Marconi became the first DXer. A group of intrepid DXers returned to Newfoundland for the 100th anniversary of this milestone, and in many ways repeated Marconi's initial success.

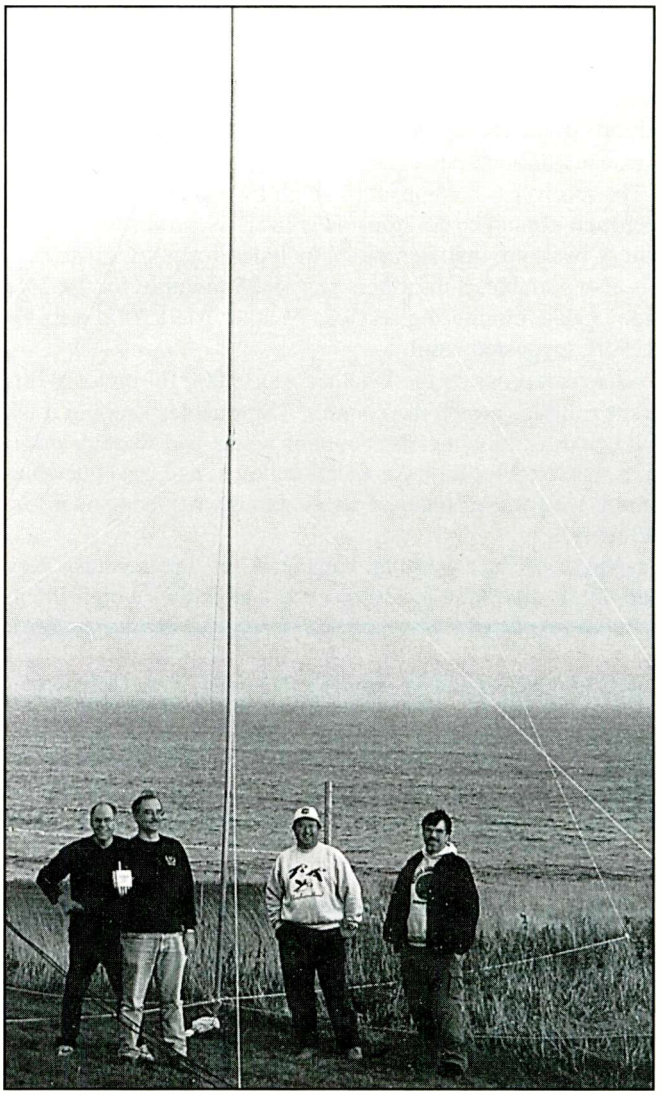
The Newfoundland DXPeditions

It all began 10 years before this latest event, when three DXers decided to meet in Newfoundland for a DXpedition to honor the 90th anniversary of Marconi's transatlantic reception. "During the summer of 1991, I started making plans for a DXpedition about which I had long fantasized. The trip would be to a location near the Signal Hill site in Newfoundland," wrote Mark Connelly in *The DXpedition Handbook* by Shawn Axelrod. Mark sparked the interest of St. John's, Newfoundland resident Jean Burnell and Neil Kazaross of California; however none anticipated the legendary scope of their groundwork 10 years ago. The first DXpedition in 1991 not only proved out Marconi's experiment with transatlantic signals received midday on mediumwave, but subsequent DXpeditions logged as many as 130 countries from five continents on mediumwave, believed to be a world record.

Five DXers participated in the Marconi 100th anniversary Dxpedition: **Jean Burnell, Mark Connelly, John Fisher, Jim Renfrew, and myself**. Jean Burnell has been the host of all 10 of the Newfoundland DXpeditions by default since receiving a fateful phone call in 1991 from Mark Connelly inquiring about potential sites. Jean discovered the Lawlor's Hospitality House in Cappahayden, overlooking the Atlantic Ocean, which has since continued to serve as the "DX Inn." Curious residents have become used to the unusual radio activity over the years although some locals still refer to it as the annual visit by "American spies."

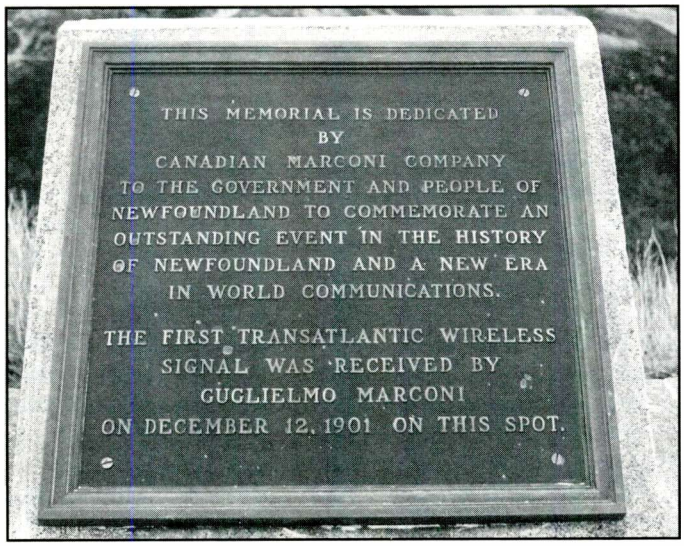


This looks like a Marconi wireless station, but it's actually CKZN 6160 shortwave beaming CBN 640 AM to Labrador.



Jean Burnell, Mark Connelly, John Fisher, and Jim Renfrew beneath the K9AY antenna at the Newfoundland DX site with the Atlantic Ocean in the background.

For Mark Connelly of Massachusetts, designer of antenna phasing units and noise reduction techniques implemented at this DXpedition, reception of local British stations was a highlight; "These stations, often 1 kW or less, are seldom heard in Massachusetts. On channels like 1485 and 1584, they're almost always buried by Spain at sites close to home. The British locals actually had programming that was entertaining: a decided plus,



A plaque marks the spot on Signal Hill where Marconi received the first transatlantic signal.

considerably more exciting than Brazilian preacher stations, for instance." Perhaps it was only fitting that England was well represented at this Marconi DXpedition.

John Fisher from Ontario, columnist for the Ontario DX Association's "*Listening In*" magazine, has been to a few of these DXpeditions including the record-breaker. "I think this one probably compares closest to the first one when I was here, on that year we heard 130 countries. This year we've been getting good openings to most parts of the world, maybe save southern Africa."

Jim Renfrew from upstate New York and columnist for the National Radio Club's "*DX News*" magazine compared this to previous DXpeditions. "The first time I came in 1995, everything I heard was new. This is now the fourth time, and much is stuff that I've already heard. So it takes a lot more digging to find more exotic catches from deep South America, and lower powered stations in Europe." Jim's persistence netted Bolivia and Iceland as local sunrise approached, while the rest of us were sleeping.

Drake was the receiver of choice with all DXers using the original Drake R8, the R8A, or R8B models. The ICOM R71A and Lowe HF-225 Europa were also in use. No Marconi balloon antennas, nonetheless an impressive array of Beverage wires helped to capture all the action; a 1-kilometer wire aimed into eastern Brazil, a 300-meter wire to Europe, a 150-meter wire to Africa, a K9AY loop, and at a remote site a 1-kilometer wire to southern Africa. ICE four-way antenna splitters allowed DXers to share antennas. Antenna phasing reduced interference, especially from radio stations in the Canadian Maritimes.

A Bit Of Trivia

By the way, Signal Hill didn't get its name from Marconi. The hill was used as a lookout for ships at sea when Marconi performed his experiment. A light would signal the arrival of ships to St. John's harbor. The landmark Cabot Tower was under construction to facilitate the light signaling at the time. Eventually, Marconi did build a wireless station on Signal Hill, but his first permanent transatlantic station was established at Glace Bay, Nova Scotia, where on December 5, 1902, he demonstrated two-way communications. About a year later, a third station was constructed at Wellfleet, Massachusetts, and on January 18, 1903, the first wireless telegraph message was sent between the United States and Europe. So expect another couple years of anniversaries to be celebrated by DXers!

Norway No More!

Norway's public broadcaster NRK has shut down all Radio Norway International operations as of January due to extensive budget cuts. Bernt Erfjord in Norway reported the following via Cumbre DX; "The decision also affects the 1.2 megawatt mediumwave transmitter at Kvitsoy Island (1314 kHz). This is also planned to be switched off alongside the four shortwave transmitters at Kvitsoy and Sveio. The two sites employ a staff of 18 (13 at Kvitsoy, 5 at Sveio). At the remote Kvitsoy Island, the station is a very vital employer, and a closedown will have great impact on the community."

This is extremely unfortunate for transatlantic DXers. Not only was 1314 kilohertz the single station from Norway in the logbooks for most, it was a beacon for northern latitude DX conditions in general.

Special QSLs From Melbourne 1629 AM

Bob Padula of Radio Melbourne 1629 AM shares some fantastic news for transpacific DXers. "I am pleased to advise that the Electronic DX Press, in association with the Australian Mediumwave Club and the Australian Shortwave Club, has established a non-commercial agreement with the manager of "Radio Promos Australia" for assistance with administrative, technical, studio, programming, and correspondence functions. Radio Promos Australia is based here in Melbourne, and owns 40 medium-frequency narrowcast licenses throughout Australia, some of which have been sub-leased to local organizations, including 'Rete Radio — the Italian Radio in Australia.' The key station is in Melbourne, known as 'Radio Melbourne 1629 AM'" It is part of the 'Radio Promos and Radio Salsa Australian Network,' operating 24-hrs, everyday of the year, on 1629 kHz from a 400 watt narrowband transmitter located in the western coastal suburb of Williamstown.

"The term 'narrowband' signifies a maximum spectrum bandwidth of 6 kHz (3 kHz sidebands), using DSB AM, as distinct from other in-band services permitted to use the wider 9 kHz bandwidth. Programming is generally 'music spanning seven decades,' in English, except 0700–0800 UTC when Vietnamese is carried. Spanish music is presented from 0800–1000 UTC. Planning is underway for the introduction of Macedonian and Chinese language programming. The station is licensed as a 'narrowcast' service, being of 'limited appeal,' serving the city of Melbourne and surrounding areas. No other station is permitted to operate on 1629 kHz unless it is at least 160 km distant. Its official allocated callsign is VMS264. The 1629 kHz frequency is shared with other narrowcast stations: Rete Italia — Adelaide, SA (400 watts), Rete Italia — Shepparton, VIC (400 watts), Rete Italia — Brisbane, QLD (400 watts), and Hospital Radio Network — Newcastle, NSW (100 watts).

"The manager has invited us to assist in determining day and night signal coverage, and has authorized us to promote the service across the hobby community worldwide. We have also been

Marker commemorating the site of the first transatlantic two-way radio communication in the U.S. at Marconi Beach, Wellfleet, Massachusetts.

appointed on a continuing basis to receive DX reports directly and to issue official Radio Melbourne 1629 AM QSLs on behalf of the manager. These QSLs feature a picture of the station's antenna installations. Reports may be sent via E--mail or postal mail, return postage should be enclosed with postal mailed reports. E-mailed reports will be QSL'd over the Internet.

"Despite the relatively lower power, it is known that the station is heard rather well, out to at least 200 km during the day, and at night, anything's possible via skywave propagation! The antenna is a top-loaded vertical radiator, about 20 meters above sea level, located right on the Williamstown foreshore. Please visit this special Website for a signal coverage map and other details, http://members.tripod.com/~bpadula/salsa.html.

"We have also been invited to run our own un-rehearsed talk-back radio/DX/SWL show on Radio Melbourne 1629 AM — this will depend on reaction from the hobby community over the coming weeks. If we do that, remember that we have a six second delay to screen out "'nappropriate' comments! We look forward to reception reports from DX listeners anywhere! Reports would need to include sufficient detail to establish authenticity — the texts of announcements would be ideal, as no formal record is maintained of actual musical tracks or titles broadcast. Best regards from everyone at Melbourne Radio 1629 AM!"

Address: Melbourne Radio 1629 AM, 404 Mont Albert Road, Surrey Hills, Victoria 3127 Australia, or by E-mail bobpadula@bigpond.com.

QSL Information

279 Sakhalin Island, Russia, E-mail letter with logo in four days, signed A. Arhipov-Sakhalin, regional broadcasting center chief manager director. E-mail address radio@adm.sakhalin.ru. Even though not mediumwave, I am still quite pleased with this, as it is my first-ever direct QSL from a Siberian station! (Martin, OR)

1010 CBR Calgary, Alberta, full-data letter size QSL, QSL style promo card with handwritten thank you message, four

Pending

New Call	Location	Freq	Old Call
WFPA	Fort Payne, AL	1400	WDLL
WOWZ	Appomattox, VA	1280	WWAR
WSCO	Appleton, WI	1570	WRJQ
KBRE	Atwater, CA	92.5	KJMQ
KLVD	Indian Springs, NV	99.3	KPXC
WVMJ	Conway, NH	104.5	WBNC-FM

Changes

New Call	Location	Freq.	Old Call
WDJD	Tafuna, AS	585	New
WEWC	Callahan, FL	1160	WELX
WJBW	Jupiter, FL	1000	WDBF
KZNR	Blackfoot, ID	690	KECN
KZNI	Idaho Falls, ID	1260	KICN
WHLY	South Bend, IN	1580	WJVA
WQMS	Quitman, MS	1500	WBFN
KFXR	Dallas, TX	1190	KTRA
KZNU	St. George, UT	1450	KTSP
KZNS	Salt Lake City, UT	1280	KDYL
KACE	Tremonton, UT	1470	New
WKCI	Waynesboro, VA	970	WINF
WRRD	Jackson, WI	540	WYLO
WZRK	Lake Geneva, WI	1550	WAUX
WTRB-FM	Sylacauga, AL	98.3	WAWV
KKRM	Arizona City, AZ	106.5	KBZR
KFXR-FM	Chinle, AZ	107.3	KFXR
KEDJ	Gilbert, AZ	103.9	KPTY
KOMR	Sun City, AZ	106.3	KEDJ
KJQY	Carlsbad, CA	95.7	KMSX
KMSX	San Diego, CA	94.1	KJQY
WKCI-FM	Hamden, CT	101.3	WKCI
WBCG	Murdock, FL	98.9	WHHD
WQLF	Lena, IL	102.1	New
KIOA	Des Moines, IA	93.3	KIOA-FM
WAZK	Nantucket, MA	89.5	New
WRKG	Drew, MS	95.3	WOHT
WOHT	Grenada, MS	92.3	WGRG
KCVZ	Dixon, MO	92.1	New
KLIK-FM	Jefferson City, MO	104.1	KJCQ
KCHQ	Albuquerque, NM	101.3	KRQS
KRQS	Santa Fe, NM	105.1	KCHQ
WYSE	Biltmore Forest, NC	96.5	New
WOJZ	Pleaseant Gap, PA	98.7	WLTS-FM
WLTS	State College, PA	94.5	WFGI
KTLZ	Cuero, TX	89.9	New
KDVE	Pittsburg, TX	103.1	KXAL-FM
KPTY	Rosenberg, TX	104.9	KOVA
KXAL-FM	Tatum, TX	100.3	KDVE
WEVI	Frederiksted, VI	101.7	New
WHIT-FM	DeForest, WI	93.1	New
WFZH	Mukwonago, WI	105.3	New
KHAT	Laramie, WY	96.7	KKRR

stickers (three styles), CBC fridge magnet, and business card in 21 days for report and U.S. $1, signed Mike Spear, Senior Producer. Address: P.O. Box 2640, Calgary T2P 2M7. (Griffith, CO)

1143 BEL3 Kaohsiung, Taiwan, QSL certificate in 45 days along with letter, full detail info, beautifully handwritten address and Taiwan stamps on airmail envelope. Address: Taiwan Chu Yeyeh, 5 Yakang No. 2nd Road, Kaohsiung 806, Taiwan. Taiwan MW QSL #14. (Martin, OR)

1557 Family Radio, Taiwan, received QSL card in 55 days for a taped report to Oakland address: Family Radio Stations, Oakland CA 94621. Taiwan MW QSL #13. (Martin, OR)

1630 WTEL Augusta, Georgia, QSL letter received in 370 days after several follow-ups and over a year of waiting, signed Harley Drew-Op Director. Address: P.O. Box 211045, Augusta GA 30917. I only need Louisiana on 1680 to have all the expanded band stations QSL'd again. (Martin, OR)

Broadcast Loggings

This month's selected loggings are from the Newfoundland Marconi 100th anniversary DXpedition. All times are UTC.

531 Utvarp Foroya, Akraberg, Faroe Islands, 0801–0806 presumed with news in a Scandinavian language, "La Bamba" by Richie Valens at 0805, fading out fast. (Fisher, NF)

549 United Christian Broadcasters, Monaghan, Ireland, 0347–0404 with Christian music and ID at 0357 as "United Christian Broadcasters Europe, it's one of the family." (Fisher, NF)

570 ZYL261 R. Capital de Minas, Belo Horizonte, Brazil, 0110–0130 Brazilian country and western music and U.S. pops, deep-voiced male announcer was difficult to understand, but jingle IDs were clear; initially a phenomenal signal but degraded by 0130. (Burnell, NF)

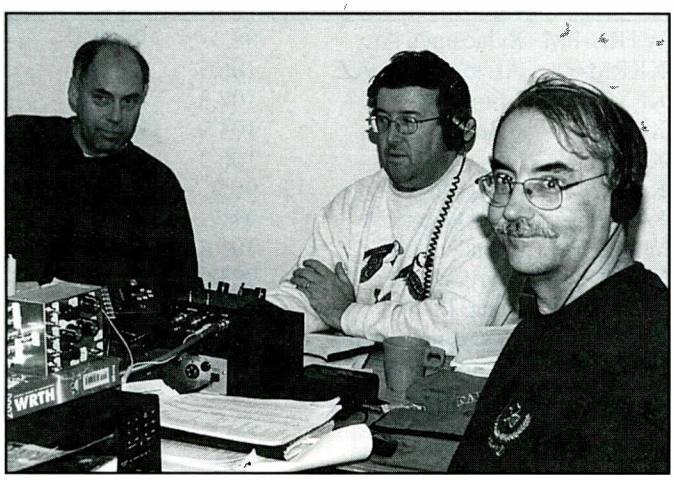
710 LRL202 R. Diez, Buenos Aires, Argentina, at 0302 IDs as "La radio m·s potente," the most powerful station in Argentina... I don't think so! (Burnell, NF)

747 Radio One, Flevo, Netherlands 0422–0452 with oldies pops from the '60s and '70s such as the Beatles, Jay and The Americans, Tony Joe White, and ID at 0452 as "Radio Ein." (Fisher, NF)

907.81 R. Syd, Banjul, Gambia, at 2022 good with African-language talk about Kabul and Ramadan. (Connelly, NF)

909 VOA Selebi-Phikwe, Botswana, at 2030 fair with Africa World Tonight in English parallel 1530 kHz on Africa wire, het on the low side from Gambia. (Conti, NF)

918 R. Slovenia, Domzale, Slovenia, 2301–2308 good with news and sports in Slovenian, ID as "Aichnia programa Radio Slovenia estudia radiocoper" at 2306 and music "Ferry Across The Mersey." (Fisher, NF)



[nfdxrm.jpg] Jean Burnell, John Fisher, and Mark Connelly in the radio room with phasing units at work on top of the Drake receivers.

918 R. Intercontinental, Madrid, Spain, at 2230 good, "Aqui Radio Intercontinental, Madrid" and "Caliente y Frio" music program over presumed Slovenia. (Conti, NF)

920 ZP1 R. Nacional, Asunci'n, Paraguay, at 0257 fair with national anthem parallel 9736 kHz. (Conti, NF)

930 CX20 R. Monte Carlo, Montevideo, Uruguay, at 0120 a brief fade in with CJYQ-Newfoundland and CFBC-New Brunswick phase nulled on the Brazil and Africa wires; news from Washington and Radio Monte Carlo ID. (Conti, NF)

954 Qatar BS, Al Arish, Qatar, at 2349 parallel 7210 kHz with Arabic female vocal, strings, flutes, mixed with Spain. (Connelly, NF)

1026 R. Salamanca (SER), Salamanca, Spain, at 2358 a male with "Radio Salamanca" ID after network split. (Burnell, NF)

1026 R.Vigo (SER), Vigo, Spain, at 2358 SER stations split for local news, this one was strongest with a woman announcer and ID "Radio Vigo, Cadena SER," back to network programming at 0000. (Burnell, NF)

1035 Northsound 2, Aberdeen, Scotland, at 2325 weather for Aberdeen, and "Northsound 2 in the morning." (Renfrew, NF)

1040 ZYK537 R. Capital, Sao Paulo, Brazil, at 2258 excellent with "Radio Capital, mas informao" jingle. (Connelly, NF)

1050 SODRE Montevideo, Uruguay, at 0228 "Montevideo... una estaciun de Grupo Uruguayano," and at 0230 "CX26, SODRE, Montevideo, Uruguay." (Renfrew, NF)

1053 Radio Jamahiriyah Home Service, Libya, at 1942 parallel 675 kHz, distinctive Big Ben bells at 2000. (Renfrew, NF)

1107 Moray Firth Radio, Inverness, Scotland, at 0604 "The Kids are All Right" by the Who, then Moray Firth Radio ID by a Scottish presenter, over Talk Sport station and Spain. (Connelly, NF)

1125 ORTN Niamey, Niger, 2157–2202 with Koran chants, brief announcement by a man, anthem at 2159 parallel 5020 kHz, followed by a tone then both frequencies went off. (Fisher, NF)

1125 Radio Trafic Plus, Houdeng, Belgium, 2212–2306 with an extremely eclectic (to say the least) collection of music including "Anarchy In The UK" by the Sex Pistols, "Harvest Moon" by Neil Young, "Diamonds on the Soles of Her Shoes" by Paul Simon, very few announcements; only a few electronic sounding echoes and jingle ID at 2306 as "Radio Trafic." (Fisher, NF)

1150 LT9 R. Brigadier Lopez, Santa Fé, Argentina at 0800, "Transmite LT9, Radio Brigadier Lopez... Santa Fé, republica Argentina" with mention of two frequencies, over/under CBN-Brazil. (Conti, NF)

1161 Tay AM, Dundee, Scotland, at 0544 "Oh What A Night (December 1963)" by Frankie Valli, then Radio Tay ID. (Connelly, NF)

1197 Family Radio, Lancer's Gap, Lesotho, at 2043 fair, in English with familyradio.com mention and Christian music. (Conti, NF)

1269 ECCA Las Palmas, Canary Islands, at 2018 English language lessons, "I like the sandwiches," etc. (Connelly, NF)

1385.91 R. Rurale, Labé, Guinea, 1955–2003 — African music, open carrier for ca. 45 seconds at 1958, nice "Radio Rurale" ID in local language at 2001, indigenous flute that may be an interval signal, then back to African music. (Burnell, NF)

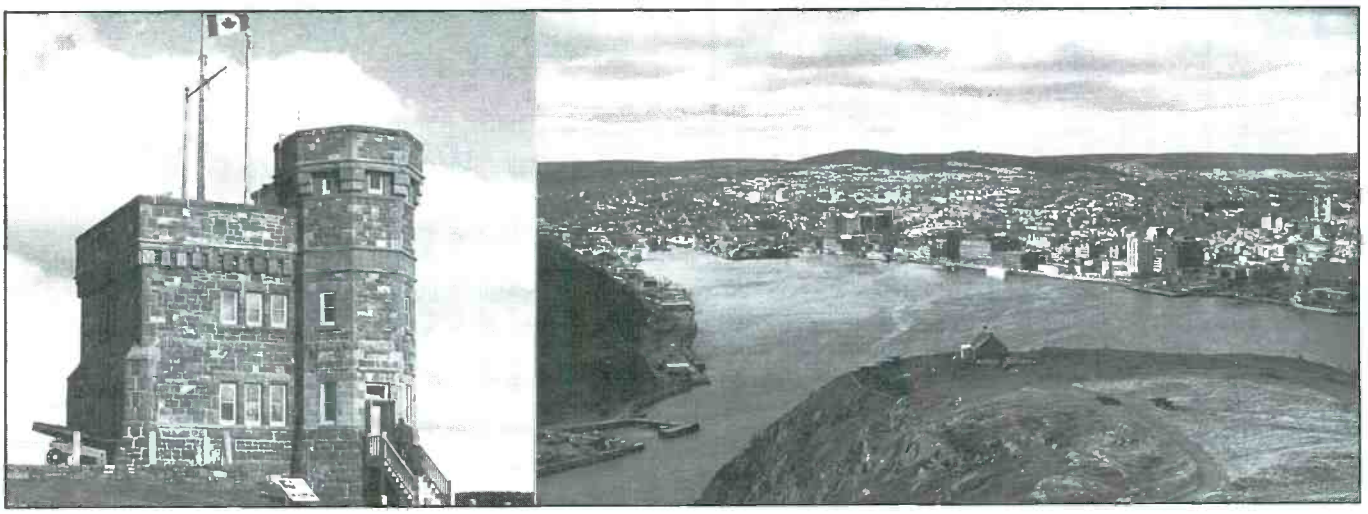
1386 Voice of Russia, Bolshakovo, Kaliningrad, 1955–2001 end of German language broadcast, old anthem of the USSR, bells interval signal, English ID and news. This was the first time that I have heard this anthem in many years. (Fisher, NF)

1458 Big AM, Ashton Moss, England, at 2135 fair, "...on Big AM" and Rod Stewart "Downtown Train," then "You're on Big AM, the greatest songs ever, playing now." (Conti, NF)

1476 Radio Africa International, Austria, 2200–2232 a new program consisting of African news items and music, program seemed to be called "Report from Africa," ID as "Welcome to Radio Africa, broadcasting from Vienna, the capital of Austria." German program started at 2217 and French program at 2231. (Fisher, NF)

1484.55 EP do Kwanza-Sul, Angola, at 2012 "Angola" and "sportive" mentioned, then at 2102 we heard pulsing dance music and announcements with strong reverb (nearly local strength on the truncated Africa wire), "Musica do (voz?)... 91.7 FM, 1480 onda media." A subsequent announcement after the next song repeated the frequencies, and may have shouted "Emissora!" (Renfrew, NF)

1494 France Inter, Corsica(?) 0004-0100+ mixing with R. Bleu was another program in French, later found by Bruce to be parallel France Inter 162 and 1375 kHz. The France Inter program was also weakly and tentatively heard on 1404 kHz. Jean did a web search, which did not indicate any particular late night programming on the Corsica transmitters during this time



Cabot Tower and the view from Signal Hill overlooking St. John's harbor, where Marconi became "the first DXer."

period, perhaps they relay France-Inter? (Renfrew, NF)

1530 Classic Gold 954/1530, Cotheridge-Worcester, England, at 0540 parallel 1521 kHz with "The Love I Lost" by Harold Melvin & the Bluenotes, and at 0200 news headlines, then slogan "Good times, great music for west Yorkshire" into "Caribbean Queen" by Billy Ocean. (Connelly, NF)

1530 VOA Pinheira, Sao Tomé e Princîpe at 2029 excellent, "...1530 for listeners in West Africa, and 909 for listeners in southern Africa. This is Africa World Tonight from the Africa service of the Voice of America," parallel 7415 kHz. (Conti, NF)

1530 AFN Keflavik, Iceland, at 0728 excellent with announcements concerning U.S. Naval families in Keflavik, CNN News, and ID as "Radio Newsline Keflavik." (Renfrew, NF)

1550 R. Caranavi, Bolivia, at 0918 while trying to dig an ID out of the Venezuelan I realized that I was listening to this Bolivian, with some sort of inspirational morning talk, including two IDs, followed by a chorus of children singing an Andean tune, faded soon after, so in for about eight minutes. It may have been back at 0937 with a children's chorus. The WRTH indicates a 0930 sign-on, but this was obviously on earlier. (Renfrew, NF)

1550 R. Metropolitana, Los Teques, Venezuela, at 0856 noted with the Venezuelan anthem, then a state anthem. After the Bolivian faded in and out a distinct ID was heard on this one. At 0409 I caught the sign-off with national and state anthems. Mark heard announcer mentions of "Los Teques." (Renfrew, NF)

1566 IRIB Bandar Abbas, Iran, at 2235 instrumental pop music and talks in Farsi, seemed to play "A Time For Love" a lot, parallel 15084 kHz and mixing with another Asian station, presumably India. (Fisher,NF)

1566 AIR Nagpur, India 0027–0034 fading up with subcontinental music, national news in Hindi at 0030, possible English news at 0038 retune. (Fisher, NF)

Thanks to Jean Burnell, Mark Connelly, Bernt Erfjord via Cumbre DX, John Fisher, Patrick Griffith, Patrick Martin, Bob Padula, and Jim Renfrew. 73 and good DX! ■

overheard

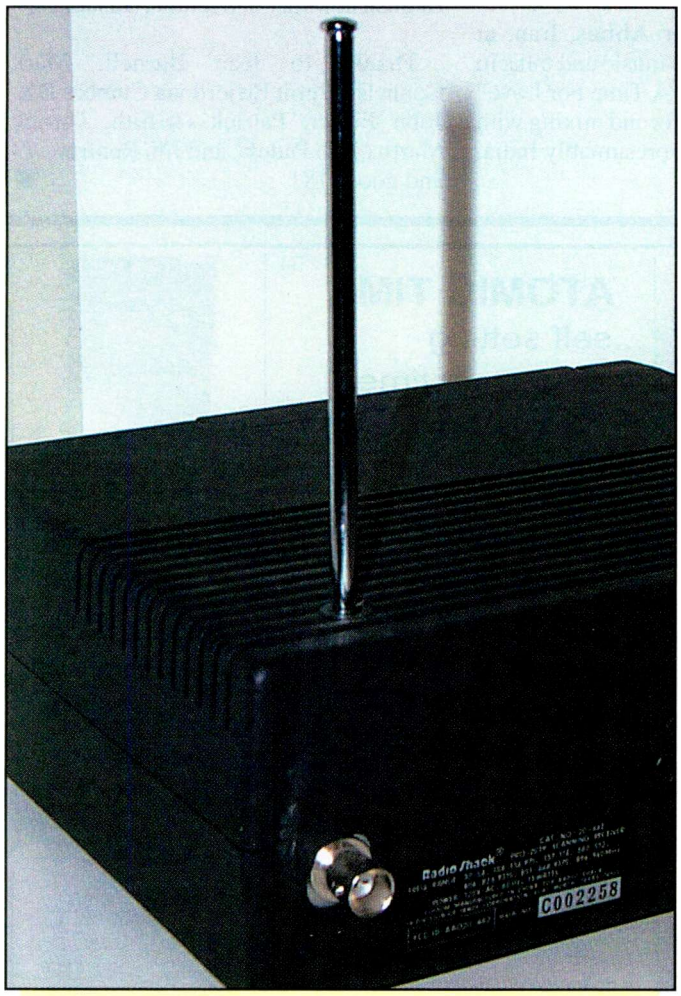
by Ken Reiss, <armadillo1@aol.com>

strategies and techniques to keep YOU informed

Time For Some Antenna Work!

Spring is in the air — or right around the corner, so you know what that means. Yep, it's allergy season. But you probably don't care about that if you're reading this article, so let's take Allegra or Allerrest and see what's happening outside in the world of scanner antennas. Spring is a good time to take inventory of your antenna situation and see what's happened through the cold months.

The general idea with an antenna is to get as much metal as you can as high in the air as you can and hope for good reception. There's an old saying that if you're in the northern states, and your antenna is still standing after the cold, snow, and ice it means that your antenna wasn't big enough or high enough to be effective as an antenna. Well, maybe not. There are a few things we can do to help the situation, and it turns out that the most metal might not be the most effective method for your radio.



This is definitely the place to start. Adjust the height of the antenna and see if that makes any improvement in reception. Notice the BNC connector on the back for addition of an external antenna. Be sure to remove the built-in antenna if you're connecting an external one.

Before you go out and spend a large chunk of change for a tower to put your scanner antenna at 2000 feet, you should be aware of a potential problem. Antennas are a double-edged sword. The idea of an antenna is to hear more stuff, right? And if everything were perfect, and in a perfect world, raising the height of the antenna, or increasing its effective gain would result in hearing more signals. In the perfect world, that's true, but ours is alas not quite perfect. For the ultimate proof of that, I remind you that we have to share the planet with Harold, so you just know we're gonna be in trouble.

The problem is that increasing the height or gain of the antenna increases the amount of signal gathered at the antenna. Two things can happen to that signal to cause reception to actually *deteriorate* rather than increase when compared with a factory mounted back-of- the-radio type antenna. The first is that we can experience signal losses in transmission lines (usually coax) that can be severe enough to defeat any gain that you might have gotten from the better antenna. This is especially true *above 400 MHz*, and acute over 800 MHz. This can be largely overcome, or at least greatly reduced, by using very high quality and very expensive transmission lines. Unfortunately, for those of us in the real world neither the high quality transmission line, or the two thousand foot tower will be an option.

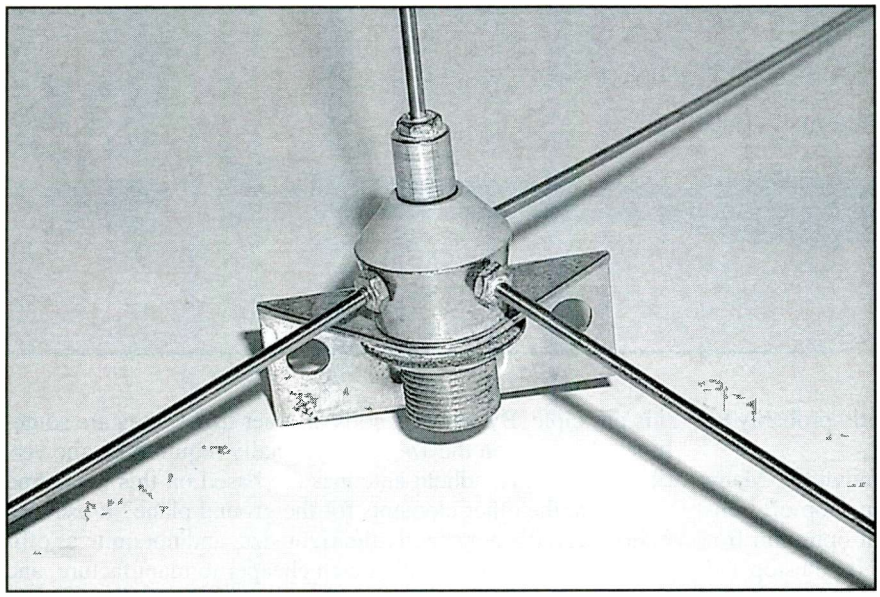
The other problem that may occur is that the antenna can actually deliver more signal to the radio, but the radio can't process it correctly. This effect is technically called many things depending on where in the radio the breakdown occurs, but we'll call it **overload** for brevity. I won't go into a lengthy discussion here, but I did want to point it out so that if you do make antenna changes and then believe you're not hearing as much as you did, you could be quite right. Don't panic, because you can always put things back the way they were, if you take small steps and make modifications progressively, rather than all at once.

The Lengthy Discussion

We managed to get out of one lengthy discussion, but we can't get out of this one. First off, let's make the point that anything that will conduct electricity (or more specifically, radio frequency signals) will work as an antenna. The old coat hanger bent in some funny shape and connected to your radio will receive. Likewise, a spool of wire from RadioShack with one end stripped and stuffed into the antenna connector will also work. But the question is always "how well?" Sometimes you can be surprised.

It's difficult to talk about antennas for any length of time without understanding wavelength. So we'll take a few minutes here and get that out of the way. If you're already comfortable with this stuff, you can skip to the next section and save some time. See how accommodating we are here at *Pop'Comm*?

We're all familiar with frequency, which is how many times per second the signal that we're interested in is oscillating per second. Radio waves travel at a constant speed of 300,000 Kilometers Meters per second (or 186,000 miles per second, if you prefer, but all of the calculations are done based on the met-



A newer model of this base antenna is available at RadioShack (20-176), which now includes radials for UHF as well. At $19.95 it's a great antenna to play with, and if you want to shorten the radials for another band you're not out much money. Notice the SO-239 connector on the bottom. An adapter may be necessary to connect to the BNC on the radio!

Many handhelds will benefit from swapping the included antenna with one designed for the band of interest. Ham 2M and 440 antennas work quite well for receive in the VHF-Hi and UHF public safety bands.

ric system). If it has to oscillate more times per second, then there's less time, and therefore, space or distance between waves. The distance between waves, or more specifically between a point on one wave and the same point on the next, is the wavelength. You can measure from peak to peak or start to start.

If you're familiar with ham radio at all, you'll know that they refer to particular bands by meter. The 40M band, for instance is just over 7 MHz, which makes the wave just over 40M long. There is a considerable rounding that occurs when naming the band, but when we get to antennas, we'll want to be a bit closer.

To calculate this, you can divide the frequency in MHz into 300. The result will be the length of the frequency in meters. It was common in the '30s and '40s for shortwave broadcasters to give their schedule in Meters. I remember on Radio Moscow announcements that they were transmitting in the 11, 13, 16, 19, 25, 31 41, 49, and 50 meter bands. That's a lot of transmitters! You might have heard a BBC announcement that they were transmitting at 50.209 meters. That's 5.975 MHz. In reality, it was rounded to 50.2 or just 50 Meters. Sometimes, just "the 49 Meter band" — happy hunting!

Most of the tuners were pretty coarse in those days, so some fiddling with the dials was common. Once you got in the right meter band, you had to dig a bit to find the exact station you were interested in hearing. In these days of digital readout receivers and synthesized tuners, the exact frequency is preferred, and much easier to find. There is, however, no reason that a receiver's readout couldn't be in Meters rather than Megahertz.

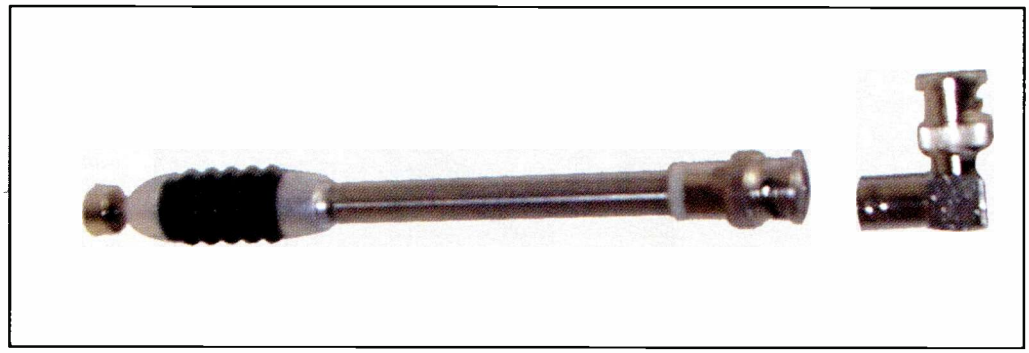
The 2M band is at 144–148 MHz. This is the rounding that we were referring to earlier. According to our formula, 150 MHz is 2 Meters. So, 146 MHz, the center of the band is actually 2.05479 Meters. That might be interesting if you were calculating the exact frequency, or if you wanted to build a transmitting antenna, but for our purposes, it's more information than we need.

Notice that as we have gone from 7 MHz to 150 MHz, the wavelength has gone from 40M to 2M (about half of a football field to slightly longer than a couch or bed). As we go higher and higher into the range of scanner frequencies, the waves continue to get shorter. At 850 MHz, we're down to 35 centimeters — just a little longer than the length of a letter-size piece of paper.

So how does all of this figure into antenna design? The efficiency of the antenna is directly related to the wavelength of the frequency versus the physical length of the antenna. An antenna cut to exactly 1/2 of the wavelength (a 1/2 wave dipole) is one of the references for antenna performance, and a relatively simple one to build. So our 146 MHz antenna should be 38 inches long, or 19 inches per side of the dipole.

As a shortcut, you can use a formula that will convert the length of the antenna elements directly to inches. Depending on which book you read, **2800 to 2808 divided by the frequency in MHz will give you the length per side for a dipole**. So, 2800/146 gives us 19.17 inches, while 2808/146 gives us 19.23. Not much difference, but my philosophy was to start longer and trim as necessary. Remember that none of this is critical for

If you want a very versatile antenna system in a hurry, this item from RadioShack is a good choice. It's adjustable in length, and based on the sections that are extended, performance can be maximized for a wide variety of frequency ranges. Add the BNC adapter and you're all set for handheld or base receivers.



receive antennas, and in practice either one would probably be just fine.

This brings us to another critical point: Bandwidth. Many antennas are frequency specific. Some of them drop off considerably the further you move away from that optimum frequency, while others are fairly "broad banded." If you stop and think about it for a second, we're asking the scanner and the antenna to perform across many hundreds of MHz, while many antennas were designed for ONE frequency. Yikes!

The good news is that for receive applications, this is not nearly as critical as it is for those who are transmitting through these things. While a transmitter will require adjustment every few hundred kHz of frequency change even on a dipole, a receiver will work several MHz away just fine. Sure, it won't be quite as efficient as an antenna just for the new frequency, but it's a lot easier than trying to put up an antenna for every frequency you want to listen to!

Starting Simple

The simplest antenna is a 1/2 wave dipole. In English, this is a wire 1/2 wave length (the length of the radio wave from peak to peak) that is split at the center. This antenna has to be cut for a particular wavelength, although it will perform reasonably well for 20 to 30 MHz on either side of center. Remember that we're talking entirely about receive antennas here. If you're licensed to transmit, all the rules change, and you should probably ignore this article completely!

The 1/2 wave dipole comes in many variations, the most common for scanner users is the 1/4 wave ground plane. What? You just said it was 1/2, now it's 1/4? Yep. The active or main element of the antenna is 1/2 of the 1/2 wave, or 1/4. Each leg of a dipole is 1/4 wave too.

What makes the ground plane type antenna different is that the active element is vertical in the center of a "plane" or number of elements that form the other leg. The ultimate ground plane is a metal disk with a radius equal to 1/4 wavelength. However, you can get almost as much performance, and save a lot of wind resistance with just a few metal elements (three or four are common). By having the elements spread out over 360 degrees, you'll get a very omni-directional pattern; it will receive signals from any direction. If you think about a typical base station antenna, this is exactly the effect they're creating. The center single element stands straight up, and there's usually three or four radials sticking out at more or less a right angle to it, that form a circle around the bottom of the single center piece. Those elements sticking out form the ground plane.

The antenna that comes with your radio is probably based on this principle. By winding coils or other tricks, they are sometimes shorter than the 1/4 wave normally required for the vertical element. Handheld antennas are based on this idea. And where are the other elements for the ground plane? It uses the radio itself. It's not exactly the right size, and not quite as efficient as it could be, but it's much cheaper to manufacture, and probably easier to fit in the box or carry than a 1/4 wave ground plane disk for 40 MHz.

Back To Scanning

The antenna that comes with your scanner is a good place to start. It's easy, costs nothing, and was probably tested by the manufacturer to provide good performance (sometimes just good, not great) over the range of the receiver. Once you've established the performance of the radio with this antenna, you can start to experiment and see what improves performance and what doesn't. You don't need sophisticated test equipment to do this, although that helps if you know how to use it. Otherwise, use your ears and see what you're hearing!

Remember that the length of the antenna directly affects its best frequency. If you listen primarily to frequencies in the 800 MHz range, you may get better performance with the antenna collapsed to its shortest length (assuming that it has that capability). If you listen mostly to 150 MHz traffic, you'll want it fully extended in most cases.

Notice that I said "MAY" get better performance with the antenna shorter. Often, particularly in the higher frequencies, it works out that a fully extended antenna works out to another ratio of the wavelength, and more metal to catch the signal. Experimentation is necessary here — you won't hurt anything.

The next thing to try is a 1/2 wave dipole, or 1/4 wave ground plane type antenna. Both are easy to build, or relatively cheap to purchase. RadioShack makes a ground plane antenna (20-176) that actually works on two bands. From the factory, it's set for about 140 MHz and 440 MHz. Cutting a bit off the ends might help fine tune those frequencies, but in practice, most people find they work pretty well right out of the box. The most notable exception is trying to use this antenna in the military air band (220–400 MHz) means that the elements do need to be cut for those bands. Our formula says 2808/300 is about 9.3 inches for the longer elements.

A lot of scanner listeners find this simple arrangement in an attic or outside works just fine for all the signals they care to hear. However, this antenna *isn't* particularly broad banded, so if you wander too far away from those frequencies that it's cut for, you'll find reduced performance, possibly to the point of being unacceptable.

Here's where the scanner favorite discone comes into play. Most of us want to be able to listen to signals over the full range of the receiver, and for scanners that's roughly 30 MHz to something around 1000 MHz, or maybe higher, but if you go much above that all sorts of things start to change, and you really need a different antenna. The same thing applies below 30 MHz; there just isn't one antenna that will go the whole distance.

The discone, however, does do a decent job throughout most of the range. Not a great job, mind you. It, like all antennas, is a compromise. To get great performance in one spot, you give up bandwidth — performance across a wide range of frequencies. To get bandwidth, you give up performance, or gain, on any particular frequency. The discone is probably about equal to maybe slightly worse off than a dipole on any given frequency. But, a discone will maintain that performance for a few hundred MHz on either side of center.

The discone does have a center frequency, just like the ground plane. Many military monitors cut discones to center around 300 MHz, but still get acceptable performance on most of the public safety bands. The disk radials should be 2008/Freqency and the longer "cone" radials should be 2953/Frequency.

Most discones are manufactured for the VHF Hi and UHF ranges, so you'll have to modify your own if you choose to do this. A standard discone will receive signals in the VHF-Lo range, although it is helped tremendously by the addition of a whip on top of the disc. The new RadioShack discone (20-043) has this addition, as do many discones by Diamond and Comet. Remember that any antenna built for ham applications will work reasonably well for your scanner.

By the same token, the standard discone will receive some signals at 800 MHz, but not perform very well. Max Systems makes an 800 MHz discone (as well as the 1/4 wave ground plane shown), or you might be better off with a dedicated antenna if 800 MHz performance is a factor for you. Experimentation, as always, is the key here.

Looking For Direction?

Up until now, we've been discussing omni directional antennas; antennas that receive equally well (or poorly) from all directions. Under most circumstances, that's exactly what you're looking for with a scanner antenna: we want to hear things all around us.

There are times, however, when we would like to concentrate on a particular signal, or perhaps we're looking for maximum distance. There are antennas that are directional.

Directional antennas, or beams, come in all shapes and sizes too. And they all have one major factor in common that separates them from the omni crowd. They give up bandwidth and omni directional performance for high performance (gain) in one direction. Many times these antennas are mounted on a rotor so that they can be turned towards whatever signal is of interest. Many transmitting operations use beam antennas for all sorts of reasons, but for receive applications, they're somewhat specialized.

One of the features of beam antennas by their nature is that while they emphasize performance in one direction, they de-emphasize performance in another (sometimes many others). This feature can be useful in helping to eliminate an interfering signal in favor of the one you're after. If you're located in an outlying area and want to hear signals from a particular transmitter or city, a beam antenna mounted high might be your only option.

Beams come in many shapes and sizes, but they tend to be a bit larger than omni directional antennas. The higher the frequency of the beam, the smaller physically it will be, but even 800 MHz antennas with many elements can become quite large. In addition, they may need to be mounted on a mast with a rotor so that you can vary the direction.

So Try Something!

Experimentation, as we've already mentioned, is the key. What works great in one situation may fall apart in another. One of the great things about antennas is that you can build many of them out of relatively low cost materials, and it doesn't take too much to experiment. That's the thing to do. Keep careful notes so you can put things back if something doesn't work.

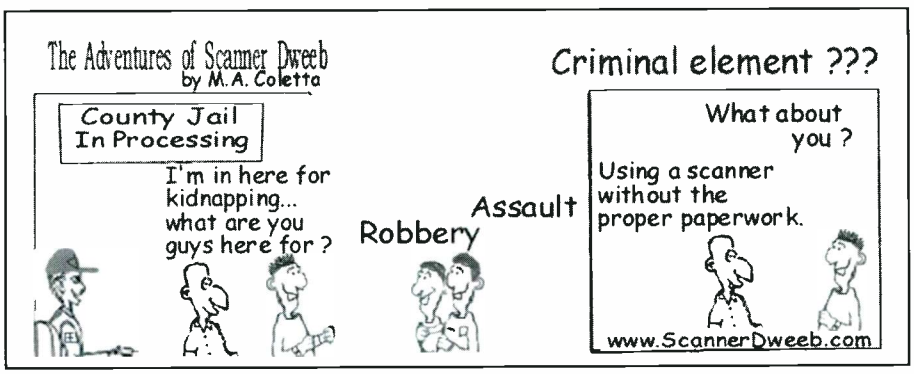
Be careful if you're working outdoors that you stay a safe distance from power lines and other structures, and always wear a safety belt if you're climbing a tower or other structure. Never work alone. Offer void where prohibited.

Remember this is a hobby, and you'll want to be around for next month's exciting issue of *Popular Communications*! Write in and let me know what's working in your situation.

Frequency Of The Month Winner!

Our winner this time is **Jay Reid** for his entry on **155.740**. We'll take a look at some of the entries for this and other frequencies in an upcoming column when we have more room! In the meantime, Jay's *Popular Communications* subscription has been extended for a year! Way to go Jay!

Let's go back to the VHF-Low band for this month. Skip could be starting to show up by later in the month, so put this one in your radio and let it run for a while. Let's pick **42.12** as our frequency to monitor, but I'll take any reports on VHF low band. Don't forget to write in and let me know what you're hearing! You can reach me via E-mail at armadillo1@aol.com, or regular mail at 9051 Watson Rd. #309, St. Louis, MO 63126. Until next month, Good listening! ■



by Keith Stein <kstein@erols.com>

space monitor

how to hear voices from the Cosmos

New VHF/UHF Satellites Launched

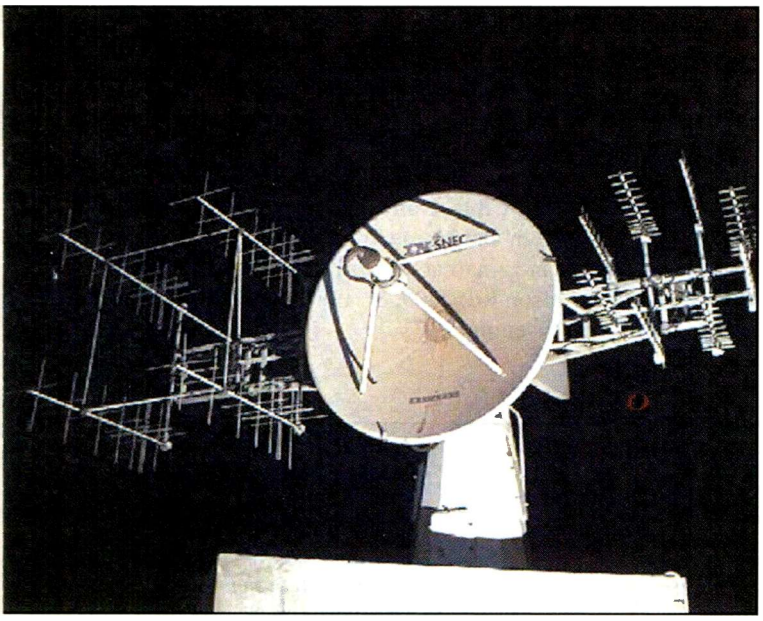
A Ukrainian built Zenit 2 rocket successfully launched a Russian weather satellite and four smaller satellites from the Baikonur Cosmodrome, Kazakhstan, at **1736 UTC** (9:36 a.m. PST) on Dec. 10. The satellites were successfully launched into a 1,018-kilometer (550 mile) high sun-synchronous orbit. The rocket carried Meteor 3M-N1, Badr B, Maroc-Tubsat, Kompass, and Reflektor.

The 2,500 kg (5,510 pounds) Meteor 3M-N1 satellite was built by Elektromekhanika Research Institute, Istra, and is designed for three years of service. Meteor-3M-N1 will use frequencies **137.400 and 137.850 MHz**, NFM mode, to send APT weather imagery.

Russian satellites, civilian as well as military, are controlled by Russia's space troops. Every Russian satellite, or most of them, is multi-purpose. They are used for civilian needs as well as military.

Meteor-3M was originally scheduled for launch in 1996–1997. Since the collapse of the Soviet Union in 1991, the military has fallen on hard times, their budgets and numbers slashed as Russia launched a helter-skelter drive toward a market economy.

In the Soviet era, Moscow had more than 100 satellites in orbit for early-warning, intelligence, and communications. Now, only four communications satellites are thought to operate and more than 80 percent of the country's "spies in the sky" are past their original operational design date.



BADR B tracking antenna in Pakistan.

Keith Stein is the editor of Space & Missile Defense Report (http://www.kingpublishing.com). You can contact him via e-mail at kstein@erols.com.

Communications

TTC1 in UHF, Modulation FFSK, 1200/2400 Baud
TTC2 in VHF, Modulation FFSK, 1200/2400 Baud,
5.0 W RF output
CRC and FEC check
S-Band Transmitter with patch antenna
According to the International Telecommunications Union, Maroc-Tubsat will use the following frequencies:
143.625 MHz
436.075 MHz
208.000 MHz

Badr B

The 70 kg (154 pound) Badr B was built for Pakistan's SUPRACO (Space and Upper Atmosphere Research Commission). It has an expected design life of two to three years. The main mission objectives of Badr B program include the indigenous development of low-cost satellites and the creation of the necessary infrastructure for future development in this field. Space Innovations Limited (SIL) of the United Kingdom designed this gravity gradient stabilized small Earth observation satellite. The spacecraft sub-systems were SIL designed and manufactured, but the spacecraft integration was performed by SUPARCO. Most of the equipment used in the satellite was acquired in Pakistan.

Badr B will conduct four major on-board experiments: 1) earth imaging, 2) use of radiation dosimeter, 3) data storage and forwarding and, 4) a charged battery experiment.

Communications, both up-link and downlink, is carried out by use of command receivers and transmitters operating in S, UHF, and VHF-bands. A typical pass over your listening post would last between **10 to 15 minutes**.

Maroc-Tubsat

The 47 kg (104 pounds) Maroc-Tubsat satellite was built for Morocco's Royal Center for Remote Sensing by the German Technical University of Berlin using a TUBSat-C bus. The remote sensing satellite will detect vegetation with a medium resolution of about 300 meters and store and forward communications for mobile localization and developing attitude control strategies for high-resolution earth observation.

Kompass

The 80 kg (176 pound) Kompass (Complex Orbital Magneto-Plasma Autonomous Small Satellite) is a geophysics satellite built by GRTsKB Makeyev for Izmiran.

Kompass was developed at KB Mashinostroenia in the city of Miass and is designed to test the techniques of predicting earthquakes.

Reflektor

The 8 kg (18 pound) Reflektor, was built by NII Kosmicheskovo Priborostroeniya to survey satellites and space debris. It is reported that the Air Force Research Lab may also be associated with this satellite.

Cape Canaveral Airborne Security

The 45th Security Forces has a requirement for day/night airborne security surveillance at Cape Canaveral Air Force Station, Fla. The requirement is to maintain security of a Extended Restricted Area and part of Cape Canaveral Spaceport during scheduled operations. The area extends outward into a three-mile restricted offshore area utilized during un-programmed emergencies/contingencies.

The 45th Operations Group at Cape Canaveral operates the Eastern Range and launches space vehicles for Department of Defense, National Aeronautics and Space Administration, and commercial customers.

The contractor will provide all personnel, equipment, tools, materials, supervision, transportation, and any other items and services necessary to provide airborne security services.

Surveillance equipment includes a Federal Aviation Administration standard airworthiness certified aircraft, stabilized infrared and color camera with magnification, a downlink system, communication equipment, and digital recording equipment. Personnel working under the contract must possess a current secret facility clearance.

The contract covers a six-month basic period starting on or about March 24 through Sept. 30 with four one-year option periods.

On Oct. 3, Cape Canaveral awarded Foldesi & Associates LLC of Merritt Island, Fla., an airborne weather surveillance contract for $93,655.00 (see *Popular Communications* Magazine, September 2001, p. 50).

GOES-N Launch Support

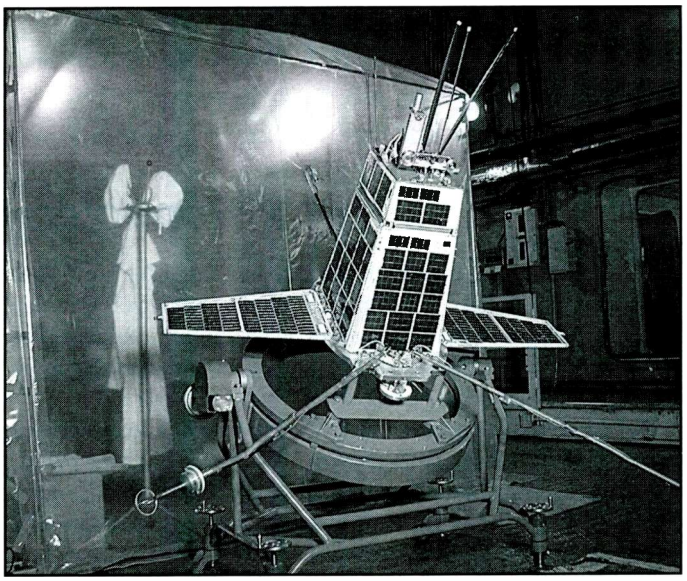
The National Aeronautics and Space Administration, Goddard Space Flight Center, Greenbelt, Md., intends to enter into a contract with European Space Agency/European Space Operations Center (ESA/ESCO) for tracking services through the Perth, Australia, ground station.

The tracking services will support the Geosynchronous Operational Environmental Satellites-N (GOES-N) mission from the pre-launch phase through the initial part of the launch and orbit phase of the mission.

GOES-N will provide more accurate location of severe storms and other weather phenomena, resulting in more precise warnings to the public.

The Perth station is in view of the GOES-N spacecraft trajectory, and will cover tracking in this remote location where no other viable resource is available. Provision of coverage to launch vehicle or spacecraft targets is dependent on the ground track they project onto the earth's surface. Consequently, specific tracing locations are required. Date of launch and trajectory dictate the support requirements.

The GOES-N mission requires coverage from Western Australia since the spacecraft separation occurs near this coverage area. ESA/ESOC has a tracking station at Perth, Australia. This asset is the only one in that geographic location with the capabilities to support the NASA requirements.



Complex Orbital Magneto-Plasma Autonomous Small Satellite.

What would you like "Space Monitor" to do for you? What articles and information would be of particular interest to you? Let us know. We look forward to hearing from you.

Monitoring Reports

All times in UTC. All voice transmissions in English unless otherwisenoted.

119.550: NASA 801 (Beechcraft King Air based at Edwards AFB, Calif., tail number N801NA) cleared for take-off by Moffett Federal Field tower, 2337, AM mode (Craig Rose–Santa Clara, Calif.).

132.550: NASA 427 (C-130Q based at NASA Wallops Flight Facility, Va.) heard heading back to Wallops, 2000, AM mode (Ron–Anne Arundel County, Md.)

133.500: NASA 967 (T-38N based at Ellington Field, TX) heard landing at March, Calif, AM mode. Also heard on 127.650. (D. Stijovich–West of March Field, Calif.)

137.500: NOAA 15 (U.S. weather satellite) heard at 2159 and 2337, NFM mode (Keith Stein–Woodbridge, Va.).

141.875: F-15 pilots performing Combat Air Patrols (CAP) over Washington, D.C., provided outstanding reports on the Leonid meteor shower, 0547, AM mode (Stein–Va.).

166.000: Progress M1-7 signal heard commanded on between 2259-2302. Also heard on 922.750 (Sven Grahn– Stockholm, Sweden).

237.000: NASA845 (F-18 based at Edwards AFB, Calif.) heard calling "NASA 1" doing test and working with chase, 1910 (Dave-Los Angeles–Calif.).

320.900: CAP fighters and tankers over Washington observing the Leonid meteor shower, 0631, AM mode (Stein — Va).

369.900: NASA 809 (ER-2 based at Edwards Air Force Base, Calif., tail number N809NA) heard above 60,000 feet, AM mode (Stijovich– Calif.).

380.220: NASA 903 (flight of two T-38Ns) performing UHF communications check, departing Maxwell AFB, AM mode (Dave–Lake Logan Martin, AL). ■

ham discoveries

connecting as a radio amateur

by Kirk Kleinschmidt, NTØZ

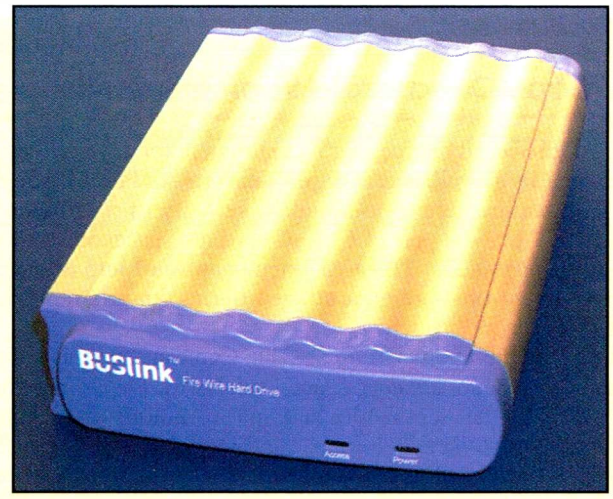
Repeaters Reshmeaters!

Perhaps because we're in the early stages of the New Year and I'm feeling a bit feisty, I need to warn you that this month's column is irreverent, especially if you're particularly fond of the status quo. If you're a bit anti-establishment (as I am), this month's outing will be right up your alley.

I'm writing this month in general response to a letter written by a new ham to one of the large Amateur Radio magazines. This new op is an educated, articulate guy who had a life-long dream of becoming a ham. He's just the kind of person our hobby wants and needs. Well, recently, he fulfilled that dream and set out to make friends and enjoy ham radio on his local repeater. As we'll soon see, the poor guy might as well have shot himself in the foot!

As luck would (or wouldn't) have it, nobody would respond to the guy's friendly overtures. Other repeater users would go about their merry ways, chatting with their established friends and plainly ignoring the new guy. This fellow would reach out again and again; his lifelong ham radio hopes, dreams and expectations trailing along, and time and time again the established users would ignore him.

After that introduction to Amateur Radio, it's no wonder the guy's feelings are crushed and his opinion of our hobby is less than spectacular. The artificial "brotherhood" and "coming together" produced by the September 11 terror attacks aside, let me say this loud and clear: Beginning hams have no place messing around with nasty, closed-minded, old-boy-networked repeaters. Period!



Need a Beefy Portable Hard Drive? If you've ever tried to transfer a large amount of data and/or software from one PC to another, you know what a hassle it can be. So, on your next trip to the office — or to your buddy's multi-op contest station — consider packing that data in an external hard drive like the Buslink 40-GB unit shown here (which stores all of my ham software and logs with ease). Using USB2 or Firewire interfaces, these new drives really pack a wallop and can easily interface with desktop and laptop PCs, including Macs. Point your browser to www.buslink.com to get the lowdown.

Although there are isolated pockets of geography where the repeater denizens are friendly and the machines themselves are open and accessible, by and large, repeaters are closed, members-only institutions.

Although there are isolated pockets of geography where the repeater denizens are friendly and the machines themselves are open and accessible, by and large, repeaters are closed, members-only institutions. They're typically hostile to newcomers and they usually represent the *worst* of Amateur Radio (with a smattering of reality here and there, usually in outlying, non-urban areas). If you want friendly repeaters, try Fargo, North Dakota. If you want nasty, beginner-hostile repeaters, try just any large metropolitan area.

Now, let me step on a few more toes. In my 25 years as a ham, I've used a repeater less than six times. I'm not missing a thing and neither will beginning hams who are looking for the warmth and camaraderie that ham radio is famous for. Repeaters have their uses, especially during emergencies and when hams are serving their communities (yes, the same guys who won't give you the time of day on a regular basis), but they in no way represent "real radio." By their nature, repeaters are artificial "frequency bands" with special lingo, typically unsettling politics, unusual rules, etc.

Real radio HF and weak-signal VHF/UHF has only a smattering of the kind of stuff you'll find on a typical unfriendly repeater and a lot of what ham radio is all about. The people are friendly, chatty and are welcoming to beginners. Each QSO is a new one not with the cretins crowding the repeater's single channel and each is an adventure.

If you're a new ham, toss that 2-meter FM radio into the back of your closet and get set up on HF (now) and 6 meters (later, if advantageous or necessary). Start on the frequencies and

"Now, let me step on a few more toes. In my 25 years as a ham, I've used a repeater less than six times. I'm not missing a thing and neither will beginning hams who are looking for the warmth and camaraderie that ham radio is famous for. "

modes that your license class allows and study for the newly defanged Morse code test if it will give you access to more bands, modes, etc. At 5 WPM, "anyone" can pass a Morse code test with even a modest effort.

With that prerequisite out of the way and perhaps an upgrade or two the Real Ham Radio, with all of its glories and lifelong camaraderie, awaits. You'll forget about repeaters until they serve "your needs" (not vice versa) and until you're an experienced ham who knows how to wrangle things on an otherwise nasty repeater.

Need more convincing? Here's only a smattering of reasons why "HF kicks butt versus repeaters":

- Long-range QSOs with friendly, unique ham operators vs. short-range comms with the same old hams who won't talk to you anyway.
- Frequency bands that allow propagation for every occasion vs. short-range comms that can perhaps be extended via multi-repeater links and other hard-to-use gadgets.
- Modes that allow voice, Morse code, digital (PSK31, RTTY, etc) and visual (SSTV) communications vs. short-range voice comms with the same old hams who won't talk to you anyway (FSTV repeaters notwithstanding).
- The ability to build your own gear (kits or from scratch) and actually use it converse with hams halfway around the world vs. a much more limited ability to build your own gear to "not" talk with the same old crowd who won't talk to you anyway!
- The ability to study the many wonders and complexities of signal propagation vs. trying to talk with the same locals hams that won't talk to you anyway (the occasional e-skip opening and mountain topping expedition excepted.

"If you're a newcomer, find a radio club or a fellow ham to help you get started on HF and spend a little extra effort to reap a towering mountain of rewards."

I could go on and on, but I'm hoping that you get my drift. Repeaters aren't real radio and repeaters are almost always the *wrong way to be introduced to ham radio*. If you're a newcomer, find a radio club or a fellow ham to help you get started on HF and spend a little extra effort to reap a towering mountain of rewards.

Today's HF radio gear is so small and so functional that even if you can't set up shop indoors, you can operate HF from your car almost as easily as operating at 2 meters. You can have the best of both worlds pleasant long-range QSOs and emergency communications without the crushing hassle of an unfriendly repeater environment.

I hope to hear you on the bands soon because you won't likely hear me on any repeater. Keep your photos, letters, and column suggestions coming to the "Ham Discoveries" column, c/o *Popular Communications* magazine, 25 Newbridge Road, Hicksville, NY 11801. ■

plane sense

your link to global aviation communications monitoring

By Bill Hoefer <flacap388@prodigy.net>

Major Changes In Our Nation's Airspace

I'm writing this on the eve of the third month anniversary of the attacks on the U.S. I will be getting my column in to Uncle Harold, much to his chagrin, usually at the very last moment in order to get the latest info to you. Airport and air traffic security is, obviously, still intense and it may be years before we ever return, if ever, to some semblance of normality. Security at air traffic facilities is still of extreme importance.

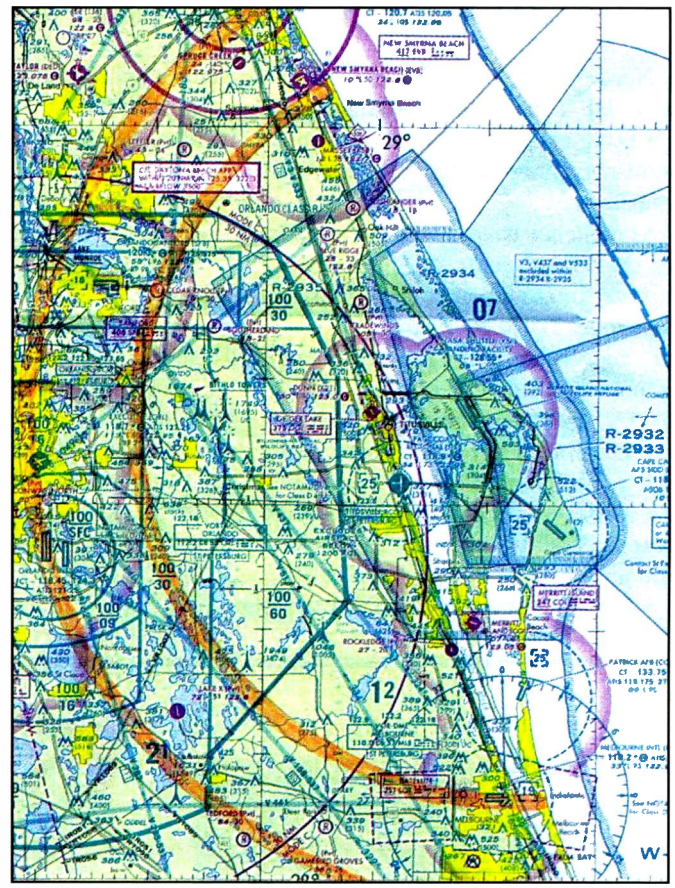
All ATC facilities have some sort of armed guards and, if not already completed, will be getting additional fencing and gates to limit access. Since the attacks I've received numerous questions as to when pilots can return to ATC facilities, and when they can begin to receive the face-to-face briefings in the flight service stations. My honest answer is, I don't know. Only time and future security measures will tell.

I'll still be putting in NOTAMs for your perusal. This first NOTAM is not current as I write this, but many pilots and controllers believe this NOTAM will be in effect each and every time a Space Shuttle goes up.

1/2953— A. SPECIAL NOTICE: CAPE CANAVERAL, FL. EFFECTIVE 0112042345 UTC (1845 LOCAL ON 12/04/01) UNTIL 0112052321 UTC (1821 LOCAL ON 12/05/01). PURSUANT TO 14 CFR SECTION 91.143, FLIGHT LIMITATIONS IN THE PROXIMITY OF SPACE FLIGHT OPERATIONS, AND SECTION 99.7, SPECIAL SECURITY INSTRUCTIONS, FOR REASONS OF NATIONAL SECURITY, FLIGHT RESTRICTIONS ARE IN EFFECT WITHIN A 40 NM RADIUS OF 2837N/8037W OR THE MELBOURNE /MLB/ VOR/DME 004 DEGREE RADIAL AT 30NM, FROM THE SURFACE TO BUT NOT INCLUDING FL 180, AS FOLLOWS: 1) NO PART 91 FLIGHT OPERATIONS, AND NO VFR FLIGHT OPERATIONS ARE PERMITTED WITHIN A 30NM RADIUS OF 2837N/8037W OR THE MELBOURNE /MLB/ VOR/DME 004 RADIAL AT 30 NM FROM THE SURFACE TO BUT NOT INCLUDING FL 180. B. WITHIN THE AIRSPACE BETWEEN THE 30 NM RADIUS AND THE 40 NM RADIUS, PART 91 FLIGHT OPERATIONS AND VFR FLIGHT OPERATIONS ARE PERMITTED ONLY IN ACCORDANCE WITH THE FOLLOWING PROCEDURES: 1) THE PILOT OBTAINS A DISCRETE TRANSPONDER CODE AND CLEARANCE FROM THE APPROPRIATE ATC FACILITY PRIOR TO ENTERING THE AIRSPACE BETWEEN THE 30 NM TO 40 NM SEGMENT. 2) THE PILOT SHALL MAINTAIN CONTINUOUS RADIO COMMUNICATIONS WITH ATC AND DISPLAY THE ASSIGNED TRANSPONDER CODE AT ALL TIMES WHILE WITHIN THE TFR AIRSPACE. C. EXCEPTIONS: AIRCRAFT ASSOCIATED WITH CAPE CANAVERAL OPERATIONS ARE EXEMPT FROM THE TFR. AIRCRAFT CONDUCTING MILITARY, RESCUE/RECOVERY, MEDICAL/LIFEGUARD FLIGHTS, EMERGENCY EVACUATION, LAW ENFORCEMENT, AND FIREFIGHTING OPERATIONS ARE PERMITTED ONLY WITH PRIOR APPROVAL FROM THE APPROPRIATE ATC FACILITY.

Looking At The Maps

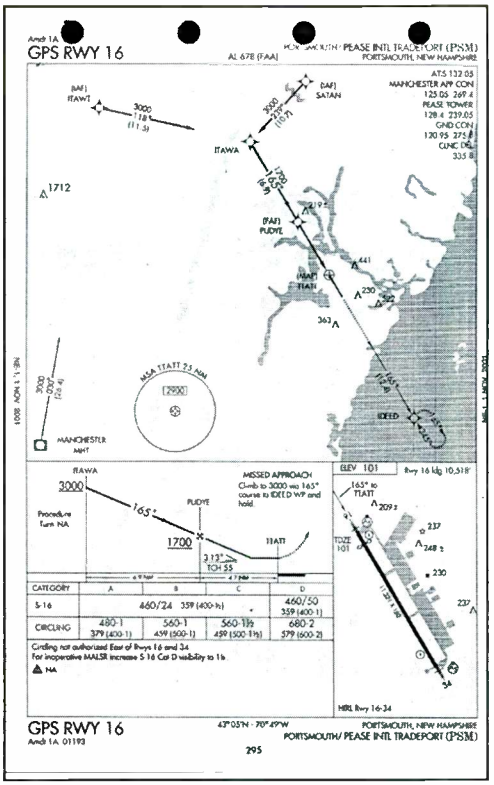
I have placed both the 30- and 40-mile radius rings on the first map. Basically, all aircraft flying inside the inner 30-nautical mile ring was grounded. Only those flying under instrument



A map of the Orlando, Florida area. (Note: maps not for navigation.)

flight rules (IFR) were allowed in this area. You see in this first ring the following public civilian airports: Massey (X50), Titusville (TIX), Dunn (X21), and Merritt Island (COI); the following private airports: Highlander, Blue Ridge, Tradewinds, and Southerland; and the following military and NASA airports: Patrick AFB (COF), Cape Canaveral AFS Skid Strip (XMR), and NASA Shuttle Landing Facility (X68). All Part 91 aircraft operations (Visual Flight Rules or VFR) were not allowed, period. This put a serious crimp on all flight training, especially at Titusville, where a major helicopter flight school is located.

Between the 30- and 40-mile radius rings is where other restrictions apply, though not as severe as those inside the 30-mile ring. Public airports here include: New Smyrna Beach (EVB), Orlando/Sanford (SFB), Orlando Executive (ORL), Orlando International (MCO), and Melbourne International (MLB). Private airports are: Spruce Creek, Leffler, Lake X and Gamebird Groves. IFR flights are still allowed in this area. VFR flights are permitted, but with limitations. Basically VFR pilots could fly from the airports away from the 40-mile ring or into the 40-mile ring in order to land. Under no circumstances could any VFR pilot enter the 30-mile no-fly-zone. To be honest a helicopter was forced down by fighters when this temporary



The approach layout for the GPS approach into Portsmouth, New Hampshire.

flight restriction (TFR) was in effect. The pilot did not know the TFR was in effect and was allowed to fly his helicopter out of the TFR.

The temporary flight restriction is just that— temporary. It is reasonable to assume, however, that from this point onward, this restriction will rear its head for each and every shuttle launch. While this does curtail certain aircraft operations, it does open the door for other frequencies to be used. Since I don't live in that part of Florida I won't have access to those frequencies, but someone living in the Orlando/Titusville/Cocoa area does.

The second map here shows a sample of class B airspace; in this case the Orlando, Florida, class B airspace. The small chart shows a sample of class B if it was cut top to bottom. Controllers and pilots refer to it appropriately as an inverted wedding cake. When you look at the map of the Orlando airspace you can see sections with one set of numbers over another. For example the center circle around Orlando International shows 100 over SFC. This means the class B airspace runs from the surface up to and including 10000 feet MSL (above Mean Sea Level). The small sections over Orlando Executive and Orlando/Sanford show 100 over 16. This indicates the bottom of these areas was at 1600 feet MSL. Aircraft flying below 1600 feet or above 10000 did not have to be in contact with Orlando Approach. Now "Enhanced Class B" (ECB) airspace extends down to the surface and up to, but not including flight level (FL) 180, or 18000 feet MSL. Any and all aircraft flying in the ECB airspace MUST be talking to approach, or the appropriate tower, and be identified on RADAR.

1/1225 — SPECIAL NOTICE ... NEW NOTAM RE VFR INSIDE ECB FOR REASONS OF NATIONAL SECURITY, EFFECTIVE OCTOBER 15, 2001, UNTIL FURTHER NOTICE, PURSUANT TO TITLE 14 CFR PART 91.139. THE FOLLOWING EMERGENCY AIR TRAFFIC RULES ARE IN EFFECT: U.S. REGISTERED AIRCRAFT CONDUCTING PART 91 AND PART 137 VFR OPERATIONS ARE AUTHORIZED TO OPERATE INSIDE "ENHANCED CLASS B AIRSPACE" AS SPECIFIED IN THE FOLLOWING PROVISIONS: 1) DEFINITION REPEATED: "ENHANCED CLASS B AIRSPACE" REFERS TO THE CLASS B AIRSPACE AND THAT AIRSPACE UNDERLYING AND OVERLYING THE CLASS B AIRSPACE FROM THE SURFACE TO FL180. THIS DEFINITION DOES NOT CHANGE THE ASSOCIATED RULES AND/OR SERVICES PRESCRIBED FOR CLASS B AIRSPACE. ADDITIONALLY, THIS DEFINITION DOES NOT CHANGE THE ASSOCIATED RULES AND/OR SERVICES PRESCRIBED FOR THE UNDERLYING/OVERLYING AIRSPACE. 2) THE FOLLOWING OPERATIONS ARE NOT AUTHORIZED UNDER THIS PROVISION AND REMAIN PROHIBITED FROM OPERATING VFR IN "ENHANCED CLASS B AIRSPACE:" NEWS REPORTING, TRAFFIC WATCH, CIVIL AIRCRAFT BANNER TOWING, SIGHTSEEING (IN ROTORCRAFT AND AIRPLANES) CONDUCTED FOR COMPENSATION OR HIRE (UNDER PART 91, PURSUANT TO THE EXCEPTION IN 119.1(E)(2)), AND AIRSHIP/BLIMP OPERATIONS. 3) AIRCRAFT MUST OPERATE USING A CODED RADAR BEACON TRANSPONDER AT ALL TIMES WITHIN THE "ENHANCED CLASS B AIRSPACE," USING NORMAL VFR CODES, I.E. 1200. 4) CAPABLE AIRCRAFT MUST MONITOR THE GUARD FREQUENCY ON 121.5/243.0 AT ALL TIMES WITHIN THE "ENHANCED CLASS B AIRSPACE." 5) APPROVAL/ WAIVER TO OPERATE WITHOUT A CODED RADAR BEACON TRANSPONDER MUST BE OBTAINED PRIOR TO THE FLIGHT, AND ON A FLIGHT-BY-FLIGHT BASIS, FROM THE LOCAL AIR TRAFFIC CONTROL FACILITY CONTROLLING THE AFFECTED "ENHANCED CLASS B AIRSPACE." VFR PILOTS IN "ENCHANCED CLASS B AIRSPACE" ARE ENCOURAGED TO OPERATE THEIR AIRCRAFT IN A NORMAL MANNER, AVOIDING AEROBATICS, LOITERING OR CIRCLING, AND UNPREDICTABLE FLIGHT PATHS.

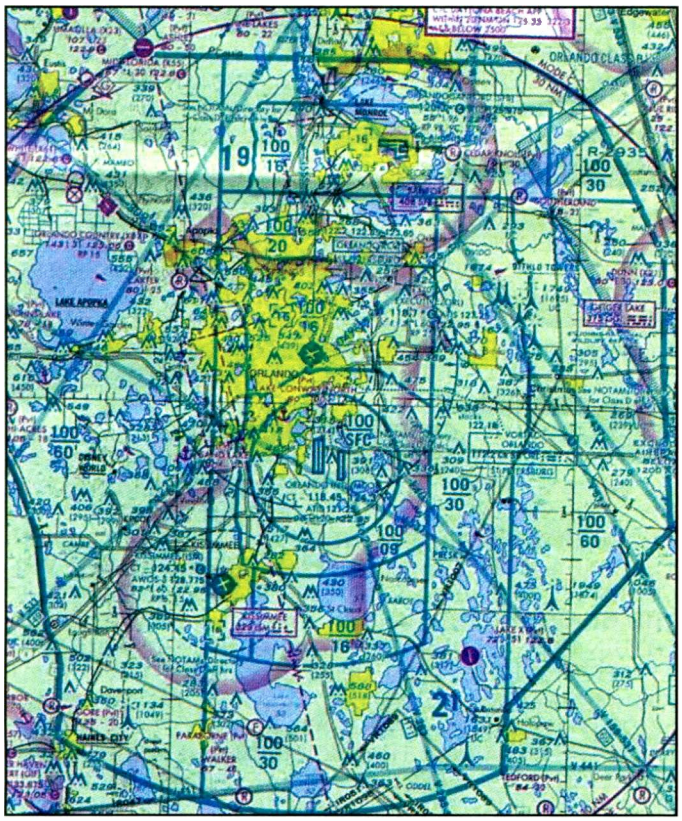
The Following NOTAM Translated: Don't Loiter, Or Look Suspicious

1/1516 — ....SPECIAL NOTICE.... EFFECTIVE IMMEDIATELY UNTIL FURTHER NOTICE, IN THE INTEREST OF NATIONAL SECURITY, ALL PILOTS OPERATING IN ACCORDANCE WITH VISUAL FLIGHT RULES ARE STRONGLY URGED TO NOT CIRCLE OR LOITER OVER THE FOLLOWING SITES: NUCLEAR/ELECTRICAL POWER PLANTS, POWER DISTRIBUTION STATIONS, DAMS, RESERVOIRS, REFINERIES, OR MILITARY INSTALLATIONS, UNLESS OTHERWISE AUTHORIZED BY ATC OR AS REQUIRED TO LAND AND DEPART AT TOWERED/NON-TOWERED AIRPORTS. ANY VFR AIRCRAFT OPERATING IN CLOSE PROXIMITY TO THE ABOVE INDICATED AREAS, IF CAPABLE, ARE TO MAINTAIN A LISTENING WATCH ON VHF 121.5 OR UHF 243.0 EMERGENCY FREQUENCIES.

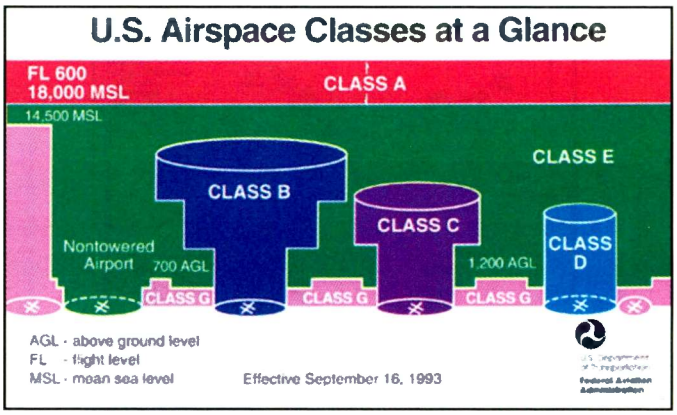
Live Near A Stadium Or Where Sporting Events Are Held?

Many of you can remember the crash of a Cessna into the bleachers after a World Series game in the mid-1980s, thus:

1/3090 — FLIGHT RESTRICTIONS EFFECTIVE IMMEDIATELY UNTIL FURTHER NOTICE. PURSUANT TO 14 CFR SECTION 91.137A(1) TEMPORARY FLIGHT RESTRICTIONS — FOR REASONS OF NATIONAL SECURITY ALL AIRCRAFT OPERATIONS ARE PROHIBITED WITHIN A THREE NAUTICAL MILE RADIUS/3,000 FEET AGL AND BELOW OVER ANY MAJOR PROFESSIONAL OR COLLEGIATE SPORTING EVENT OR ANY OTHER MAJOR OPEN AIR ASSEMBLY OF PEOPLE. UNLESS AUTHORIZED BY ATC FOR PURPOSES OF CONDUCTING ARRIVAL/DEPARTURE OPERATIONS.



The 30-mile no-fly zone and the 30- to 40-mile limited fly zone around Cape Canaveral.



A chart showing classes of U.S. airspace.

And before I go to the frequency and ID changes take a look at the GPS runway 16 approach plate for Portsmouth/Pease International Tradeport, in Portsmouth, New Hampshire (PSM). When the approach was initially made six intersections/reporting points were put on the approach. When a pilot is making this approach he will normally start at ITAWT intersection and in toward the airport. Following them inbound you will read: ITAWT ITAWA PUDYE TTATT. If the pilot cannot land he then goes to IDEED. If you don't understand this, just think of what Tweedy Bird says when he/she sees Sylvester in the cartoons.

NEW/CHANGED/DELETED FREQUENCIES

New

AL
Anniston Army Depot (04AL)
Birmingham Apch 125.45/381.5

AK
Platinum (PTU)
AWOS-3 118.375

CA
Hemet — Ryan (HMT)
SOCAL Apch 133.5/324.1

Riverside — March AFB (RIV)
SOCAL Apch 133.5/119.25/284.0/324.1

CO
Granby – Grand County (GNB)
ASOS 119.925

IA
Dubuque Regional (FUQ)
ILS Runway 36 110.9

WI
Sparta — Sparta/Ft. McCoy (CMY)
AWOS-3 118.375

Changed

FL
Eglin AFB (VPS)
Apch was 119.0, now 132.1 and 125.1
Apch was 269.375, now 360.6 and 281.45
Mary Esther— Hurlburt Field (HRT)
ATIS was 354.45, now 360.675

IL
Chicago ARTCCF (ZAU)
Cedar Rapids RCO was 261.5, now 328.4

NC
Maxton— Laurinburg (MEB)
Apch was 295.0, now 343.725

OR
Portland International (PDX)
Apch was 133.0, now 124.35

CHANGED AIRPORT IDs

AR
Booneville — Worth James Ranch Airport was 0M7, now 4AR7
Hughes — Tucker Field was 78M, now 78AR

FL
Groveland — Klinger Aero Airport was X42, now 02FA
Hastings — Earle Airpark Airport was 80J, now 13FA
Homestead — Richards Field Airport was 6X6, now 04FA

KY
Burnside — Boss Airport was 511, now 08KY
Utica— Goode Airpark Airport was 912, now 3KY1

LA
Cameron Airstrip Airport was 1R5, now 1LS5
Darnell — Bayou Meadows Airport was 9M1, now 9LS1

Ferriday — Summerell Airport was 0R8, now 1LS8
Shreveport — Lucien Airport was F33, now 33LS
Tendal — 4B Ranch Airport was 9M9, now 9LS9
Venice — Phi Venice Airport was 7R1, now 7LS1
Zwolle — Ammons Airport was 5F9, now 5LS9

MS

Benoit — West Bolivar Flying Service Airport was 02M, now MS37

NM

Belen — Burris Ranch Nr 1 Airport was 55E, now 55NM
Captain— G Bar F Ranch Airport was E84, now NM84
Carlsbad — Seven Rivers Airport was 62M, now 62NM
Claunch — Monte Prieto Ranch Airport was 57E, now 57NM
Clovis— Lockmiller & Sons Airport was 59E, now 59NM
Columbus Municipal Airport was CUS, now 0NM0
Columbus Stockyards Airport was E87, now 12NM
Forrest — Curtis and Curtis Airport was 65E, now 65NM
Hobbs — Industrial Airpark Airport was HBB, now NM83
Hope — Flying H Ranch Airport was 68E, now 68NM
La Luz — Otero Mill Airport was 72E, now 72NM
Organ — Waids Airpark Airport was 0E2, now 0NM2
Picacho — Diamond A Ranch Airport was 81E, now 81NM
Pie Town — King Ranch Airport was 83E, now 83NM
Pie Town — Nalda Ranch Airport was 84E, now 84NM
Reserve — Negrito Airport was 0E7, now 0NM7
Roswell — El Paso Natural Gas Co. Airport was 91E, now 91NM
Silver City — Beaverhead Airstrip Airport was 1E3, now 13NM
Silver City — Me-Own Airport was 1E0, now 1NM0
Wagon Mound— S & S Ranch Airport was 98E, now 98NM

OK

Bartlesville — Hi-Way Airport was K92, now OL92
Blackwell — Earl Henry Airport was BWL, now 6OK6
Broken Arrow — Cotton Field Airport was 84F, now 84OL
Cache — Huscher Field Airport was 85F, now 85OL
Calvin — Pace Field Airport was 88F, now 88OL
Duncan — Copland Airport was 98F, now 98OL
Harrah — Steciak Strip Airport was 1R2, now 1OL2
Lawton — Jerry-Wright Airfield Airport was 4F3, now 4OL3
Mooreland — Henderson Farm Airport was 35K, now 35OL
Oklahoma City — Expressway Airpark Airport was 2EJ, now 12OK
Stilwell Airport was 45M, now 45OL
Temple Airport was F79, now OK79
Welch — Harrison Airport was 3F8, now 3OL8
Wetumka — Petes Airpark Airport was 8F1, now 8OL1

TX

Abilene— Zimmerle Airport was 6F2, now 6TE2
Aspermont— Douglas Flying Service Private Airport was 6F8, now 6TE8
Austin — Horseshoe Bay Airpark Airport was 4R2, now 4XS7
Booker — Figure 1 Ranch Airport was 4E1, now 4TE1
Brady — Curtis Ranch Field Airport was 10R, now 12TE
Brazoria — Eagle Airpark Airport was 2C0, now 2TE0
Bristol — Eisenbeck Ranch Airport was F65, now 65TE
Bryan — Varisco Airport was 13R, now 13TE
Catarina — Diamond H Ranch Airport was 0T1, now 0XS0
College Station — Texas World Speedway Helistop Nr 1 was 0T8, now 0TE8
College Station — Texas World Speedway Helistop Nr 2 was 0T9, now 0TE9
Colorado City — Trulock Ranch Field airport was 7F8, now 7TE8
Crane — J-Bar Ranch Airport was 8F2, now 8TE2
Crystal City — H & F Properties Airport was 8R4, now 8TE4
Crystal City — Wagner-Braxdale airport was 2T8, now 2TE8
Cuero Community Hospital heliport was 2T9, now 2TE9
Dallas — Lavon North Airport was 46F, now 46TS
Dayton — Pavlat Airport was 3T7, now 3TS7
Dayton — Pinoak Airport was 3T9, now 3TE9
Dayton — Seaberg Ranch Airport was 21R, now 21TE
Dell City Heliport was 4E5, now 4TE5
D'Hanis — Glasscock field Airport was 4T8, now 4TS8
Dripping Springs — Alexander Ranch Airport was 5T3, now 5TE3
Dripping Springs — Bleakley Ranch Airport was 5T2, now 5TE2
Eagle Pass — Farias Ranch Airport was 5T8, now 5TE0
Grandview — Flying M Ranch airport was 11F, now 11TE
Hawkin s— Holly Lake Ranch Airport was 16F, now 16TE
Kerrville— Prison Canyon Ranch Airport was 66T, now 66TE
Port Lavaca — Tanner's Airport was 9R4, now 9TE4

VA

Whaleyville — Umphlett Airstrip Airport was 9W1, now VG37

WV

Craigsville — Herold Airport was 9W2, now WV63
Glendale Fokker Field Airport was GWV, now WV66

by Joe Cooper <ur-review@provcomm.net>

Humber Radio History

If you remember a few columns back I looked at the preservation of decommissioned commercial station KPH. The station's buildings and antenna site are located on the West Coast of the United States near San Francisco, and its beginnings can be traced back to before the San Francisco earthquake of 1906. In 1913, the Marconi Company built a rotary spark gap transmitter at the current site, along with two huge vertical antennas.

KPH is notable as having been the last commercial station in the United States to use CW, with the historic sign-off taking place on July 12, 1999. Today the National Parks Service, and a group of hjm radio operators, industrial historians, and volunteers called the Maritime Radio Historical Society, are working together to preserve the buildings, antennas, and equipment of this important point-to-point utility radio station.

KPH is not the only commercial station to have just recently ended the use of CW. On the 30th of June 2000 commercial station GKZ became the last station of its type in Britain to retire their radiotelegraph key. This column is about the history of that station, written by the manager and radio operator of GKZ at the time of its historic last CW transmission. His is name is David Hopcroft, and I would like to thank him for being so kind in sharing his story and pictures with us here. If you read through the story, you will also find that David has an important offer for anyone who logged GHZ's last transmission.

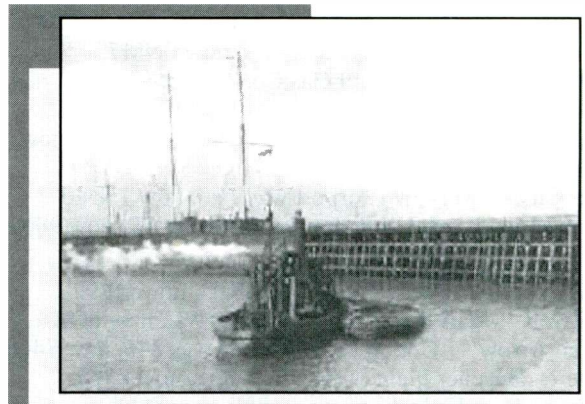
I've also got lots of logs and some news as well. But first, let's get on to David's interesting story and pictures.

Introducing GKZ

GKZ was one of eight coast radio stations around the UK coast offering ship-to-shore communications in the Medium Frequency (MF) bands on CW, AM (later SSB) and radio teletype. It was located on the western coast of England near Lincolnshire at the town of Trusthorpe, between Mablethorpe and Sutton on Sea (see Map 1).

The service area was nominally the Southern portion of the North Sea, though locally based ships tended to work back to GKZ whenever possible. At night, and given the right conditions, we regularly had QSO's out in the Atlantic and down into the Mediterranean.

I had the privilege of working at GKZ as a radio operator and then later as the day-to-day manager from 1968 until 1995. The main duties of the station were commercial telegram and telephone services. In addition, a permanent watch was kept on 500 kHz and 2182 kHz, the CW and phone distress frequencies on behalf of the UK Coast Guard Service. All Distress (SOS), Urgency (XXX) and Safety (TTT) comms traffic was handled by Coast station people after our station relayed the information to them.

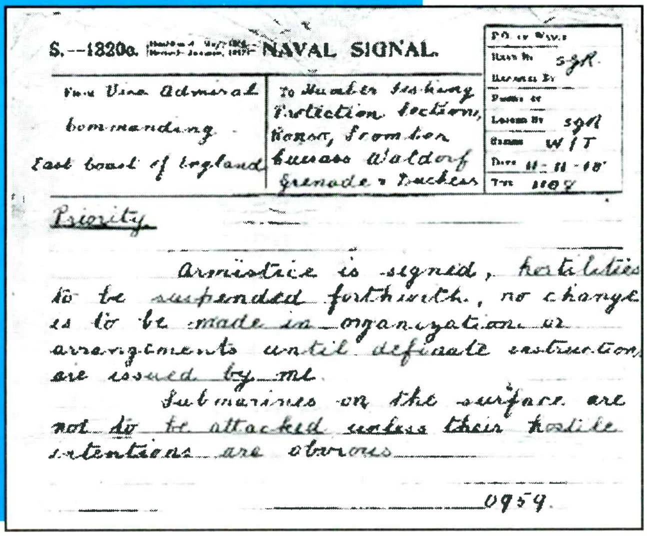


GKZ during the WWI when it was located on a pier in Grimsby. Notice that the "buildings" are actually converted railway coaches.

The Admiralty during the First World War erected GKZ at the town of Grimsby. Placed at the end of a pier out in the sea, it was originally housed in three passenger railway coach bodies placed end to end as shown in Picture x. The station was equipped with a Navy type 2KW Spark Transmitter. The receiver was a standard Post Office type for the time, with aerial and intermediate tuning by hand operated condensers situated outside of the receiver. [Note: The British Postal service originally promoted Marconi's "wireless" experiments. As a result they were involved in setting the standards for many types of radio equipment used in that country.]

Perhaps the most memorable signal transmitted from Grimsby was official notification of the Armistice of World War I. It was addressed to the Humber Fishery Protection Section, who were responsible for a fleet of armed trawlers patrolling the Southern North Sea. The message was transmitted as 4-letter code groups. Among the groups were several which were "redundant" groups that did not refer to anything, but merely sent to confuse would be code breakers.

Our guest writer, David Hopcroft. David was the manager and radio operator of British Coastal Station GKZ, which was the last to use commercial CW in that country.



S.—1320a. NAVAL SIGNAL.

From Vice Admiral Commanding East Coast of England

To Humber Fishing Protection Section, Honor, from Lon[illegible] Waldorf Grenade & Tuckers

sgR — W/T — 11-11-18 — 1107

Priority

Armistice is signed, hostilities to be suspended forthwith, no change is to be made in organization or arrangements until definite instructions are issued by me.

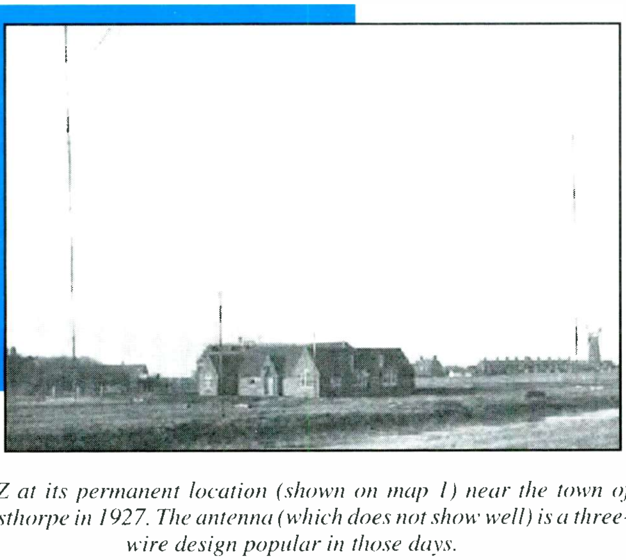
Submarines on the surface are not to be attacked unless their hostile intentions are obvious

0959.

Official notice of the end of World War I sent out to ships protecting the North Sea fishing fleet. Note the instructions not to attack German submarines that may surface.

Looking at the photograph of the message, you can see that it went out at the 11th hour of the 11th day of the 11th month 1918. After war measures were ended, the station's operation was handed over to the Post Office in 1920. The staff was also changed over to civilian operators at that time.

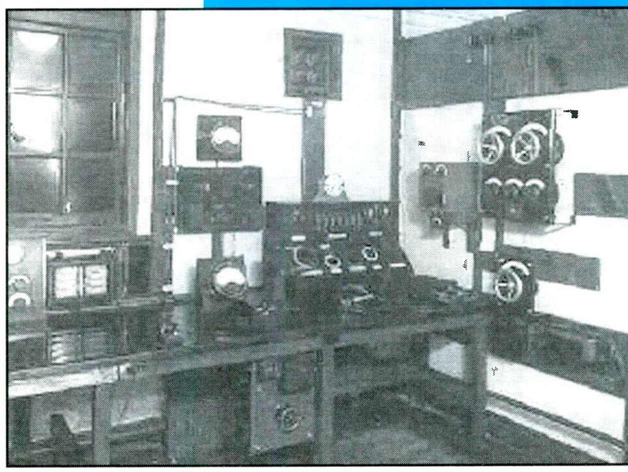
One new piece of technology that was installed after the war was direction-finding equipment. There was no space on the Grimsby pier for such a system and so a new site was needed. After some investigation, a new site free from outside electrical interference was found at the town of Trusthorpe, some 20 miles to the south. The move took place on December 7, 1927 and the station was re-named Humber Radio.



GKZ at its permanent location (shown on map 1) near the town of Trusthorpe in 1927. The antenna (which does not show well) is a three-wire design popular in those days.

The new station was updated to state-of-the-art equipment for the time. Some of this equipment included something new called "valve transmitting equipment." A Bellini-Tosi direction finding system was fitted, and also the first RadioTelephony (AM) transmitter at a UK coast station was installed for simplified communication with Trawlers.

The main transmit aerial at Humber Radio was a 3-wire "T" type. The Main Receive and DF aerial slung beneath the "T" consisted of two triangular frames approx. 95 feet long at right angles to each other. The main CW transmitter operated at 1 kW and was made by the Radio Communication Co. Ltd. The main receiver was a Marconi-type 12A direction finding receiver used for the main 600-metre band.



A Marconi type 12A reciever used for radio direction-finding for locating ships at sea. The wheels located on the wall turned the directional antenna to null the signal.

This transmitter remained in service for many years, though one radio operator recalled that in its latter years, you often had to go inside the cage and give it a whack in the right place to change frequency!

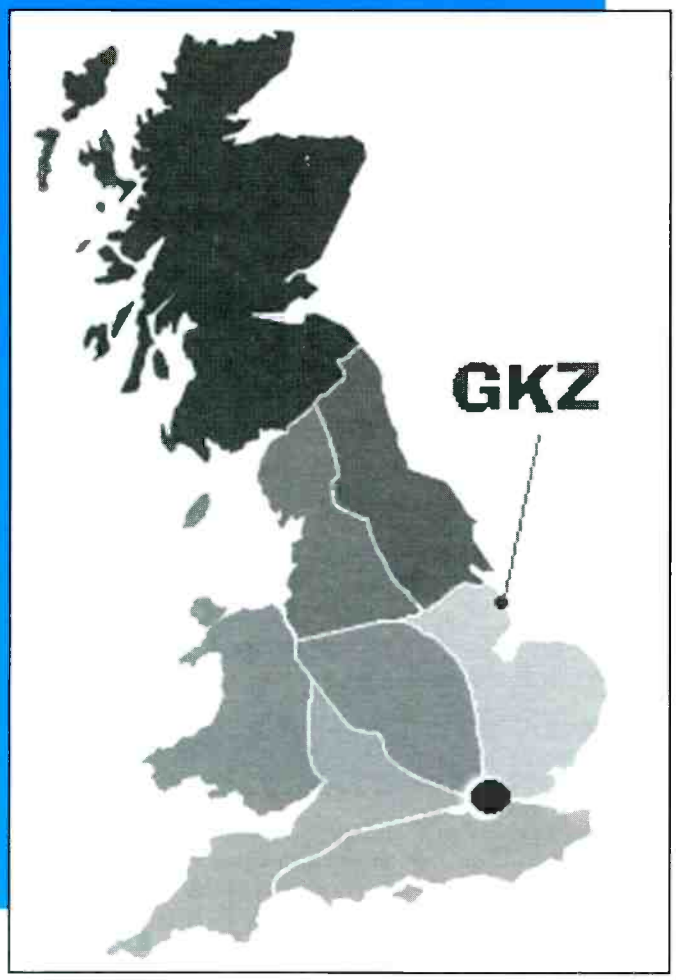
The AM phone transmitter was Marconi-type XMC 1 telephone set and was in fact a 500W transceiver. Initially it was used for message traffic only but in 1937 the first ever telephone "link call" was made when a trawler was connected to his company office through the telephone system. It was a fairly crude simplex system transmitting on 163 meters and receiving on 139 meters with all TX & RX levels being set by hand.

GKZ After WWII

After World War II a new Post Office "in house" transmitter was developed and in the early 1950s, the W5 became the workhorse transmitter for the next 30 years. It was an 800W CW and double side band transmitter with three spot frequencies for CW and five for phone. It was a basic carrier generator and amplifier followed by two stages of power amplification. Switching was done by Geipel relays at the low power stage.

At the same time Marconi "Mercury" receivers were fitted. Also around 1954 the DF was changed to the more accurate Adcock system which also enabled bearing to be taken on RT frequencies as well as WT. The aerial system for this was four 80-foot steel masts at the corner of a 100-foot square.

On the night of 31st January 1953, the staff on duty though used to handling distress traffic, suddenly found themselves to be in distress. During severe gales at a period of high tides, the sea broke through the coastal defenses and flooded the station that was located just behind sand hills close to the sea. Urgency



Map 1 - Showing the location of coastal station GKZ near the town of Trusthorpe.

(XXX) traffic was in progress with the mv "Levenwood" in difficulties in the rough seas when the power failed. Very shortly after the emergency generator also failed.

The last entry in the CW log reads "GNF de GKZ, Station Flooding, Ceasing Operations." This was not the end as the staff realized that if the emergency batteries were under water, chlorine gas could easily be produced. So they set to and lifted them on to benches above the flood level.

It turned out that the whole of the district was by now under water. The sea had broken through defenses in many places, not only in this area but also other parts of the country and across in Holland. Services were resumed a few days later using the mobile station set up for just such an emergency. It was a converted bus parked on a hill some 15 miles inland. Permanent repairs took about six months before "normal service was resumed."

The same transmitters were brought back in to service, but this "tide level mark" on the W5 could be seen throughout the rest of its service. I know — during maintenance periods I tried without success clean it off.

A vacuum tube based Marconi VHF transceiver on Ch.16 (156.8 MHz) & Ch.26 was fitted in 1959, but was not immediately popular because coverage in the main shipping area of the River Humber 20 miles away was not all that good. Oil & Gas exploration came to the North Sea in the mid-1960s, and with it, traffic increased significantly. To provide for the special comms needs of the many drilling rigs arriving in the area, private circuits were set up. GKZ offered 15 RTT channels and one dedicated SSB RT channel. The RO's soon became familiar with all the new drilling and pipe laying activity taking place on their doorstep. Names like HUGH W GORDON/WF9654, HERCULES/WK5301and BARGE 279/HOZO soon became very familiar. Radio operators got to know each other's voices and a friendly atmosphere soon developed.

The next equipment changes came with SSB. The old double side band only W5 and the Mercury receivers were no longer suitable, so along came single frequency Ajax transmitters and Eddystone EC958 receivers.

Like the W5, the Ajax's were no frills basic transmitters. Back up was via a Marconi H1000 with all the spot frequencies feeding a wide band amplifier. The W5 however, was not dead yet as it was still very capable of providing the 500kHz coverage, and continued in this role for a few more years.

The times on nights spent listening to local ships voyaging to the Med and calling Cagliari/IDC without success then jumping in to work him were now numbered. SSB somehow did not seem to pack the same "punch" as DSB.

The End Of CW At GKZ

Traffic continued to grow through the early 1980s with VHF services being rapidly expanded. Remote sites at Grimsby, Bacton near Cromer in Norfolk, and Orfordness near Woodbridge in Suffolk became part of the Humber Radio network. An interesting sideline to the site near Woodbridge is that the VHF dipoles were located on the same mast that was used for the development of radar during World War II by Robert Watson-Watt.

In the late 1980s economics began to figure in the provision of ship-shore services and operators became unfashionably expensive. So a computer controlled data network known as DOC (Distributed Operator Control) was developed linking all 8 manned UK Coast Stations. Now, the operators sat in front of a VDU screen and a keyboard and any call, whether it was WT or RT coming in to any station around the UK Coast or any of their remote VHF sites could be answered by the first available operator wherever he was sat. So Humber found itself answering ships calling Lands End/GLD and Wick/GKR found itself answering ships calling Humber. You could still key CW but it wasn't always your own transmitter A continuous watch was still kept on the calling and distress frequencies of 500 and 2182 kHz by Stonehaven/GND and Land's End/GLD with traffic being queued into the ësystem' by a search point operator.

With the arrival of satellites and mobile phones, traffic was in decline, so some degree of automation was probably the best way forward. Dedicated CW at Humber also ceased at this time.

It was of course the end of "your local coast station." The arrival of the microchip signaled the end of the personal touch. Things only got worse after that. More satellites were flying overhead and mobile phones were getting better and better. As traffic declined, so did staff numbers until Humber ended up as a remotely controlled site for Stonehaven/GND, the last manned station for UK Coastal Radio.

The end of the era finally came at 1200gmt on 30th June 2000. De Dah De Dah Dit [End of transmission, going off air] had arrived. A couple of days later I went back with fellow radio operator, Andy Whetton, and together we switched everything off, ending up in a nearby pub having a couple of beers.

A view of contemporary operations. Notice the modular approach with redundancy in having multiple Eddystone EC958 receivers. Not shown are the AJAX brand transmitters housed in a separate room

The frequencies (in kHz) we used at Humber were as follows:

CW

500 Distress and Calling
512 Calling during Distress working
484 Traffic working

SSB

2182 Distress and Calling
1869 Broadcast of Navigation and Gale warnings, weather forecasts
1925 General Traffic
2684 General Traffic
2810 General Traffic
3778 General Traffic

RTTY

General Traffic

I salvaged a few of the old QSL cards, so if any of you DX'ers can find any of these frequencies in your logs, let me know details and I will send you a commemorative QSL for the price of the postage. You can QSO me on david.hopcroft@btinternet.com"

Your Letters

After much thought I decided to print the following E-mail that I received from Joerg Klingenfuss, who publishes a very important list of ute frequencies. If you are at all serious about ute monitoring his list is one of the best there is. Having said all that, I have to tell you I get nothing back in return. Joerg has repeatedly turned down my requests for evaluation copies of his publications, but despite that, I still think that it's too important to tell you that this material is there than get miffed about that small point. So here is the info located in the box top right of this page.

Reader's Logs

Again we have a really good set of logs for you to review this month. As I've outlined in the previous columns, these logs are being published according to the guidelines set out by the FCC and as regulated under the Radio Act of 1934. No reports will be made of the actual content of point-to-point transmissions heard, unless they are being specifically broadcast to all stations. This practice will be the standard for this column, particularly during this time of war measures and declared national disaster due to the terrorist attacks of September 11, 2001 and the continuing War on Terrorism.

All frequencies are in Kilohertz.

00000: STATION, Anytown, USA, summary of traffic heard in MODE at 0000 Z , personal comments here (JC)
182: LGN Bergen radio "no traffic on hand for foreign ships" NOR USB 17:33Z (BvR)
260: FME: Tipton NDB Tipton Airfield Odenton MD 0615 CW. This is a recently activated beacon as far as I can tell. (MADX)
278: NM: Matagami NDB Matagami Canada 0609 CW (MADX)
326: FC: Fredericton NDB Fredericton Canada 0607 CW (MADX)
332: DC: Oxonn NDB Washington DC 0605 CW 25 watts. (MADX)
335: YLD: Chapleau NDB Chapleau Canada 0604 CW (MADX)
340: YY: Mont Joli NDB, Mont Joli Canada 0559 CW (MADX)
341: YYU: Kapuskasing NDB Kapuskasing Canada 0600 CW (MADX)
342: MTN: Martin NDB Martin State Airport Baltimore MD 0557 CW (MADX)
349: APG: Aberdeen NDB Aberdeen Proving Grounds MD 0556 CW (MADX)
351: YKQ: Waskaganish NDB Waskaganish Canada 0554 CW (MADX)
355: CGE: Cambridge NDB Cambridge MD 0549 CW (MADX)

363: RNB: Rainbow NDB Millville NJ 0547 CW 50 watts (MADX)
366: YMW: Maniwaki NDB Maniwake Canada 0544 CW (MADX)
371: FND: Ellicott NDB Baltimore MD 0543 CW (MADX)
376: ZIN: Great Inagua NDB Great Inagua Island, Bahamas 0539 CW 400 watts (MADX)
380: UCY: Cayojabo NDB Cayojabo Cuba 0536 CW (MADX)
382: YPL: Pickle Lake NDB Pickle Lake Canada 0626 CW (MADX)
385: GAI: Gaithersburg NDB Gaithersburg MD 0525 CW (MADX)
391: DDP: Dorado NDB San Juan PR 0522 CW (MADX)
392: ML: Charlevoix NDB Charlevoix Canada 0523 CW (MADX)
394: YB: North Bay NDB North Bay Canada 0519 CW (MADX)
404: IUB: Institute NDB Baltimore MD 0517 CW 25 watts. (MADX)
413: CBC: Anahuac NDB Anahuac TX 0515 CW 25 watts. (MADX)
432: IZN: Lincolnton NDB Lincolnton NC 0512 CW 25 watts. (MADX)
606: ZSD: SA Navy Durban 1616 MFSK 54.5 (RH2)
2182: Clyde uk-cg ann MSI on 1883 kHz G USB 16:22Z (BvR)
2182: ICB Genova radio EE and II ann I USB 16:34Z (BvR)
2182: EJM Malinhead cg radio ann nav wrng on 1677 kHz IRL USB 16:36Z (BvR)
2182: Yarmouth uk-cg ann nav wrng on 1869 kHz, vhf ch 10 and 73 G USB(BvR)
2182: OXZ Lyngby radio clg UNID mv in DD DNK USB 16:59Z (BvR)
2182: OXZ Lyngby radio ann gale wrng on 1734 kHz DNK USB 17:05Z (BvR)
2182: Cross Med, FF ann F USB 16:16Z (BvR)
2182: OST Ostend radio ann WX on 2761 kHz BEL USB 17:17Z (BvR)
2182: Shetland, UK three-day forecast on 2226 kHz USB 19:09Z (BvR)
2182: EAO Palma radio ann 1755kHz USB 17:35Z (BvR)
2182: Cross Corsen FF ann "bulletin metreologiqe" F USB (BvR)
2182: SPB Szczezin radio ann nav wrng 1794 kHz POL USB 17:58Z (BvR)
2182: Cross Gris-nez FF ann WX F USB 18:06Z (BvR)
2182: Holeyhead uk-cg ann MSI G USB 18:35Z (BvR)
2182: IAR Rome radio ann nav wrng I USB 18:38Z (BvR)
2182: ELXS UNID mv clg Livorno radio qsy to UNID chnl INT USB (BvR)
2582: ZBM: Bermuda Harbour Radio 0840 USB w/MIB in EE (MADX)
2598: VOK: Canadian Coast Guard Labrador 1007 USB w/MIB. (MADX)
2598: VOJ: Canadian Coast Guard Port aux Basques 0807 USB w/MIB in EE (MADX)
2598: VON: Canadian Coast Guard St. Johns 0837 USB w/MIB in EE (MADX)
2598: VCG: Canadian Coast Guard Riviere au Renard 0847 USB w/MIB (MADX)
2749: VAR: Canadian Coast Guard Fundy (St John) 1040 USB w/MIB in EE and FF. (MADX)
2749: VCS: Canadian Coast Guard Halifax 0812 USB w/MIB in EE (MADX)
2840.7: DLGZ: BREDSTEDT (C21) 21.05 ARQ German coastguard vessel giving position to KUEWAZ, Cuxhaven (PT)
3162.1: RFFXCFB: France 20.40 ARQ-E3 96/400 COMSOUT 41 MEUCON with EXERCICE SENLIS tfc in FF to RFFDCC - CMO SIC CJTF 41 MEUCON on UFB cct (PT)
3372: RFFDDTX: France 20.50 ARQ-E3 96/400 CJTF 41 MEUCON with EXERCICE SENLIS tfc in FF to RFFXCFB - COMSOUT 41 MEUCON, also FAVIERES with svc tfc to RFFXCFB all on UBF cct (PT)
3413: Shannon VOLMET 0532 USB w/aviation WX. (MADX)
3485: Gander VOLMET 0557 USB w/aviation WX. (MADX)
4029: AAR4UL: UNID U.S. Army MARS 0118 USB w/Army MARS net. (MADX)
4214: IDR2: Italian Navy, Rome 0558 BAUDOT 75/850 w/CARB. (MADX)
4232: FUF: French Forces, Fort de France 0555 BAUDOT 75/850 w/call tape (MADX)
4295: FUE: French Navy, Brest 0552 BAUDOT 75/810 w/call tape. (MADX)
4304: RFTJE: French Navy, Dakar 0551 BAUDOT 75/850 w/call tape. (MADX)
4369: WLO: Mobile Radio 1200 USB w/announcements and WX. (MADX)
4481.7: RFTJ: FF Dakar 0723 ARQ-E3 48/400 CdeV to itself & at 0823 & (RH2)
4525: 5ST: ASECNA Antan 1615 RTTY 100/400 Meteo codes (RH2)
4583: DDK2: Hamburg Meteo 0544 BAUDOT 50/400 w/call tape. (MADX)
5450: RAF VOLMET: 0535 USB YL/EE w/aviation WX. (MADX)
5450: RAF VOLMET 0532 USB w/aviation WX. (MADX)
5505: Shannon VOLMET 0533 USB w/aviation WX. (MADX)
5696: RESCUE 6034: USCG HH-60J #6034 (CGAS Clearwater) 0023 USB wkg CAMSLANT for radio check and position report. (MADX)
5696: CAMSPAC: 0913 USB wkg 1704: USCG HC-130H7. "Understand, secure your radio guard." (MADX)
5818: UNID: French Forces 0530 ARQ-E 72/380 idle. (MADX)
5860: FAAZID: ARTCC Indianapolis 0252 MIL-STD 188-141A/USB w/sounding call. At 0301, FAAZBW: ARTCC Boston w/sounding call. (MADX)
5883: V02A: Atencion Numbers Station 0527 AM w/YL/SS/5FGs already in progress. (MADX)
6224: UNID: 1034 UNID-PSK burst. (MADX)
6496.5: CFH: CANFORCES Halifax 0659 BAUDOT 75/855 w/WX tfc. (MADX)
6500.9: UT NMN Chesapeake USCG Automated high seas report with special mention of Tropical Storm Jerry. Gave toll free number for comments and questions and was out at 0429 USB 0401 (SW)
6586: USB New York Radio working various flights with SELCAL checks and position reports, including American 68, American 62 and SPEEDBIRD 208 (SW)
6604: New York Radio with aviation WX in USB from 2240-2249Z (CG).
6604: Gander Radio with aviation WX. Very raspy due to geomagnetic disturbances. USB from 2249-2259Z (CG).
6604: Gander VOLMET 0552 USB w/aviation WX. (MADX)
6604: USB 0240 UT New York Radio with volmet for Atlantic coast airports (SW)
6745: CANFORCE 80: id'd as aircraft #339 0522 USB wkg Trenton Military w/pp to WINNEPEG OPS. (MADX)
6866: UNID 0515 UNID 200/500. C3G id'd as BAUDOT. If so, it is encrypted. QRT at 0518. (MADX)
7527: CS4: UNID US Customs 0353 MIL-STD 188-141A/USB w/sounding call. (MADX)
7535: NORFOLK SESEF 1329 USB w/"Test 123 321. Any station this net, this is Norfolk SESEF, radio check, over." (MADX)
7811: E10: MOSSAD Numbers Station 2146 AM w/SYN2. (MADX)
7811: E10: Mossad Numbers Station 0349 AM w/SYN2. (MADX)
7811: E10: Mossad Numbers Station 0441 AM w/SYN2 (x2) then quiet. Back at 0446. (MADX)
7880: DDK3: Hamburg Meteo 0730 FAX 120/576 w/48hr surface prog chart. Very fuzzy with noise. (MADX)
7969: UNID: 0622 CW w/5LGs already in progress. QRT at 0623 w/no signoff. (MADX)
8010: V02A: Atencion Numbers Station 0618 AM YL/SS/5FGs already in progress (MADX)
8097: prob M8A: Cuban Numbers Station 0722 CW 5FGs (cut) already in progress. (MADX)
8115.5: UNID: British Mil 0130 PICCOLO-12 encrypted. (MADX)
8187.7: 9MR: Malay Navrad 1745 RTTY 50/850 RY/ID/SG etc (RH2)
8298: VTP: IN Vishakpatnam 1703 RTTY 50/850 RY/ID & ship calls (RH2)
8335.3: DRH.: UNID German Navy vessel (missed last letter of call) 0141 USB + 3-CH VFT wkg DHJ59: German Navy Wilhelmshaven. (MADX)

8453: FUG: French Navy La Regine 0622 BAUDOT 75/850 w/call tape. (MADX)
8478.5: FUF: French Navy Fort de France 0620 BAUDOT 75/830 w/call tape. (MADX)
8496: CLA: Havana Radio 0619 CW w/call tape. (MADX)
8499.7: VTH: IN Bombay 1657 RTTY 50/850 RY/ID/RBSL etc (RH2)
8514: WLO: Mobile Radio 0617 SITOR-B 100/170 w/end of tfc. Ended with "Your amvers and obs traffic help maintain continued operation of these shore station facilities. Thank you for your support". QRT at 0618. (MADX)
8551.5: CTP: Portuguese Navy 0614 BAUDOT 75/850 w/call tape. (MADX)
8573: CLA: Havana Radio 0610 CW w/call tape. (MADX)
8588: Mad Slot Machine 1002 USB (MADX)
8642.1: MGJ: Royal Navy Faslane 0605 BAUDOT 75/340 w/CARB on Ch3 (8642.085) of Royal Navy VFT. (MADX)
8642.1: GYA: Royal Navy Whitehall 0748 BAUDOT 75/340 w/CARB on ch3 of Royal Navy 4-channel VFT. /12921.1 (MADX)
8670: IAR: Rome Radio 0603 CW w/call tape. (MADX)
8670: IAR: Rome Radio 0715 CW w/call tape. (MADX)
8686: IRM: Rome Medical Radio 0601 CW w/call tape. (MADX)
8722: 7TF: Boufarik Radio 0802 USB YL/FF w/MIB. /13095/ (MADX)
8773: prob UIW: Kaliningrad Radio 0755 USB w/pp in RR to UNID mv (MADX)
8788: WLO, Mobile AL with WX info including hurricane warnings in USB from 2307-2314Z (CG).
8788: WLO: Mobile Radio 1200 USB w/announcements and WX. (MADX)
8806: 3AC: Monaco Radio 0930 USB w/MIB. (MADX)
8806: WLO: Mobile Radio 1200 USB w/announcements and WX. (MADX)
8806: 3AC: Monaco Radio 0715 USB w/MIB in FF and EE. Music signal leading up at 0713. (MADX)
8828: Auckland VOLMET 0551 USB w/aviation WX. (MADX)
8828: Honolulu VOLMET 0557 USB w/aviation WX. (MADX)
8888: Samara VOLMET 0548 USB w/RR aviation WX. Weak but readable. (MADX)
8924.4: 2 UNID OMs with chit-chat, sounded like fishermen. USB from 2320-2323Z (CG).
8939: Rostov na Donu VOLMET 0556 USB w/RR aviation WX. (MADX)
8957: Shannon VOLMET 0533 USB w/aviation WX. (MADX)
8983: CAMSLANT: 1440 USB wkg 6001: USCG HH-60J. (MADX)
8983: CAMSLANT: 1445 USB wkg 6020: HH-60J and 6031: HH-60J. (MADX)
9041: 5YE: Nairobi Meteo 1625 RTTY 100/850 (RH2)
9115: V02A: Atencion Numbers Station 0804 AM YL/SS/5FGs already in progress. (MADX)
9122.5: NWO: USACE Omaha 1515 MIL-STD 188-141A/USB clg NWOFR NUI: USACE Omaha District unit. (MADX)
9151.7: Cairo, Egypt 19.50 ARQ MFA with tfc in AA to Paris embassy (PT)
9323: M8A: Cuban Numbers Station 1020 CW w/5FGs (cut) already in progress. (MADX)
10051: Gander VOLMET 0550 USB w/aviation WX. (MADX)
10100.8: DDK9: Hamburg Meteo 0032 BAUDOT 50/400 w/call tape. (MADX)
10242: UNID: U.S. Customs Service 1833 USB + PARKHILL Vocoder. Two stations active in short QSO. (MADX)
10470.5: FDC: French Air Force Metz 2009 CW w/call tape. (MADX)
10482.3: RFFLA: Paris, France 11.05 ARQ-E3 100/400 Idled until 16.15 then lots of tfc. RFFLA - ALFAN with tfc to RFV1RES - FS LA RIEUSE on IRE, Paris - Reunion cct. Also relaying 5-lg message from RHRMDAB (COMUSNAVCENT??) to ALINDIEN, among many others. (PT)
10486: CENTR6: Romanian MFA Bucharest 2112 MIL-STD 188-141A/USB clg ZOW: UNID Romanian Embassy (MADX)
10536: CFH: CANFORCE Halifax 0043 BAUDOT 75/850 w/meteo tfc. (MADX)
10581: S92: Swedish Embassy Managua 1311 MIL-STD 188-141A w/sounding call. (MADX)
10850.5: UNID: British Mil 0457 PICCOLO-6 encrypted. (MADX)
10917.7: RFTJ: French Forces Dakar 0105 ARQ-E3 48/380 w/broken plaintext football news in FF. (MADX)
11039: DDH9: Hamburg Meteo 1757 RTTY 50/400 WX for Region Biskaya! (RH2)
11125: HZN: Jeddah Meteo 1945 BAUDOT 100/780 w/WX tfc. (MADX)
11125: HZN: Jeddah Meteo 1700 RTTY 100/850 WX for all OE airports! (RH2)
11175: Andrews AFB with coded message broadcast USB (CG).
11175: N452 calling MAINSAIL, answered by Offutt AFB and Andrews AFB but apparently N452 didn't hear either one of them. USB from 2255-2302Z (CG).
11175: Andrews AFB calling Offutt AFB for radio check in USB at 2305Z (CG).
11175: REACH 9191 with p/p to Norfolk Command Post via Offutt AFB. He provided ETA, description of cargo, number of crew, etc in USB from 2224-2229Z (CG).
11175: REACH 3076 with p/p to HILDA METRO via Andrews AFB USB from 2000-2013Z (CG).
11175: REACH 5401 with p/p via Offutt AFB to HILDA METRO USB from 2018-2032Z (CG).
11175: REACH 089Y requesting radio check, answered by Puerto Rico in USB at 2025Z (CG).
11175: VIPER 11 with p/p to Savannah Maintenance via Offutt AFB. VIPER USB from 2037-2039Z (CG).
11175: Andrews AFB with coded message USB from 2101-2103Z (CG).
11175: S4JG calling Andrews AFB for radio check in USB at 2105Z (CG).
11175: REACH 2061 with p/p to AMCC via Puerto Rico. USB from 2123-2128Z (CG).
11175: MAGIC 75 with p/p to Denver Center via Offutt AFB. USB from 2129-2140 with much QRM from other traffic (CG).
11175: REACH 6953 with p/p to unknown party via Andrews AFB. USB from 2130-2141 (CG).
11175: TOPCAT 82 requesting radio check, answered by Offutt AFB in USB at 2156 (CG).
11175: REACH 0457: C-5 0213 USB wkg LAJES w/pp to Dover Meteo and pirep. (MADX)
11253: RAF VOLMET 0546 USB w/aviation WX. (MADX)
11297: Rostov na Donu VOLMET 0555 USB w/RR aviation WX. Great signal. (MADX)
11318: Novosibirsk VOLMET 1044 USB w/RR aviation WX. (MADX)
11318: Novosibirsk VOLMET 0541 USB w/RR aviation WX. (MADX)
11318: Samara VOLMET 0546 USB w/RR aviation WX. (MADX)
11440: CESYP: Colombian Navy Special Command, San Andres and Providencia Islands 2358 MIL-STD 188-141A/USB clg RADGENA: UNID Colombian Navy. (MADX)
11448: UNID: 0735 UNID 75/240. (MADX)
11470: UNID: Russian Mil 0539 81-81 40.5/500 encrypted. (MADX)
11475.2: UNID: Russian Military 1250 81-81 40.5/250 encrypted. (MADX)
11487: UNID: Russian Military 0621 81-81 81/170 encrypted. (MADX)
11570: UNID: Algerian Diplo 0818 8-tone MFSK in 100bd tfc mode. (MADX)
12101: S84: Swedish Embassy Washington DC 1434 MIL-STD 188-141A/USB clg S12: Swedish Embassy Bogota. (MADX)
12101: S94: Swedish Embassy Guatemala City 1223 MIL-STD 188-141A/USB + Swedish Diplo MIL-STD 188-110A wkg S84: Swedish Embassy Washington DC. (MADX)

12101: S92: Swedish Embassy Managua 1224 MIL-STD 188-141A/USB w/sounding call. (MADX)
12170: UNID: poss Russian Meteo 0647 poss CIS-14 96/500. CIS-14 reported here in the past. (MADX)
12211.5: UNID: Bulgarian Diplo 1317 8-TONE MFSK ISS mode. MFA Sofia logged here in the past. (MADX)
12219.7: Cairo, Egypt 19.25 ARQ MFA with mixed letters and figures group tfc to London embassy (PT)
12225: S84: Swedish Embassy Washington DC 1813 Mil-STD 188-141A/USB clg S12: Swedish Embassy Bogota. (MADX)
12489: P3DK7 TK Renda 0955 ARQ svc msg to Vladivostok (ML)
12489: UFIG TH Inzhener Dmitriev 1000 ARQ selcal KYMX, UFIG log on & msg to Vladivostok (ML)
12489: UGDT M/V Irbis 1005 ARQ w/UGDT log on & svc msg to Vladivostok (ML)
12489: UHAR TN Ust'ilymsk 0955 ARQ svc msg to Vladivostok, UHAR log on/off (ML)
12489: UHCF TH Olga Sadovskaya 1049 ARQ tfc to Vladivostok (ML)
12599.5: UAT: Moscow Radio 0823 CW w/call tape and free idle (MADX)
12600: 7TF: Boufarik Radio 0827 SITOR-B 100/170 w/tfc list (MADX)
12600.5: HEC GW Berne 0740 CW id & ARQ tuning (ML)
12635.5: LZW: Varna Radio 0631 SITOR-B 100/170 w/WX in EE. Station reports from Shabla, Kaliakra, Varna, Emine, Bourgas, and one other (garbled). (MADX)
12654: TAH: Istanbul Radio 0757 CW w/call tape (MADX)
12664: FUO12: UNID: FUM? 1731 RTTY 75/850 RY/ID/SG/ Testing NAWS — Same freq. as FN Tahiti and ID seems close to FUM! But strange to see NAWS in Pacific? (RH2)
12711: PWZ33: Rio de Janeiro Naval 0555 BAUDOT 75/810 w/call tape and WX in Portuguese. Weak but readable. (MADX)
12763.5: DAO Kiel ? rdo 0730 CW w/CQ DE DAO tape & data bursts (ML)
12799: LSD836 GW Buenos Aries 0930 CW id & ARQ tuning (ML)
12870: UFZ: Vladivostok Radio 0631 CW w/RR plaintext WX tfc. Good signal, easy to read tfc. Sent at 31 wpm. (MADX)
12970: UFZ: Vladivostok Radio 0638 BAUDOT 50/170/3SC w/call-tape then storm warning. (MADX)
13000: UNID: French mil 15.30 ARQ-E 72/400 Idling with Betas (PT)
13089: USCG Master Station Atlantic, Chesapeake VA with WX info in USB at 2330Z (CG).
13110: WLO: Mobile Radio 1200 USB w/announcements and WX. (MADX)
13152: 3AC: Monaco Radio 0930 USB w/MIB. (MADX)
13158: LFL: Rogaland Radio 1215 USB w/MIB in Norwegian and English.(MADX)
13188: UNID: Petropavlovsk-Kamchatskiy Radio 0725 USB w/pp in RR to UNID mv. (MADX)
13250: FREEDOM: UNID 2149 USB clg UNID (sounds like "Elaina") (MADX)
13270: Gander VOLMET 0550 USB w/aviation WX. (MADX)
13270: UT New York Radio with Volmet USB 1751 (SW)
13285: Guangzhou VOLMET 0545 USB w/EE aviation WX. (MADX)
13470: UNID: Russian DoSC Net 1430 BAUDOT 73.3/510 w/5LGs to UNID subscriber. (MADX)
13475: CDDA: Venezuelan Navy Cuidad Guayana 1950 MIL-STD 188-141A/USB wkg MARGARITA: Venezuelan Navy Margarita. (MADX)
13475: CDDA: Venezuelan Navy Cuidad Guayana 2000 MIL-STD 188-141A/USB wkg GUASDUALITO: Venezuelan Navy Guasdualito then into MIL-STD 188-110A. (MADX)
13510: CFH: CANFORCE Halifax 1154 BAUDOT 75/810 w/meteo tfc. (MADX)
13565: UNID: UK Mil Cyprus 1642 MFSK 195.3/300 also on 18789.0 kHz (RH2)
13583: UNID: Russian FAPSI 0738 CROWD-36. QRT at 0741. (MADX)
13597: JMH4: Tokyo Meteo 1319 FAX 120/576 satellite pic. (MADX)
13879.5: UNID: poss French Forces 0640 UNID 96/400 signal too weak to get good id. (MADX)
13882.5: DDK6: Hamburg Meteo 0711 FAX 120/576 w/chart. (MADX)
13900: BMF: Taipei Meteo 1506 FAX 120/576 w/surface analysis chart. At 1009, plaintext chart in Chinese. (MADX)
13900: BMF: Tai-pei Meteo 1747 fax 120/576 Fair chart (RH2)
13907: TRC: UNID USCS 1754 MIL-STD 188-141A/USB w/sounding call. (MADX)
13907: CS2: USCS Service Center Orlando FL 1729 MIL-STD 188-141A/USB clg RAY: UNID USCS. (MADX)
13937: WCZ5371: Yacht Gryphon 1323 PACTOR II wkg XJN714: SailMail Inc Lunenberg, Nova Scotia Canada. (MADX)
14400: KAH: Slovakian Embassy Cairo 0325 MIL-STD 188-141A/USB w/sounding call. (MADX)
14426: UNID: Algerian Diplo 1335 8-tone MFSK in callup mode followed by weak MIL-STD 188-141A/USB. (MADX)
14441.5: NNN0TWT: USN MARS Citra FL 1636 USB wkg NNN0OON: USN MARS. (MADX)
14447: Paris: Paris 1744 ARQ-E3 100/400 CdeV to itself on REI cid (RH2)
14670: Time Station CHU — Canada 1803 UT (SW)
14817: UNID: FAPSI 1725 Crowd36 40 V long TX! (RH2)
14996: RWM: Moscow Time Station 1638 CW w/vvv cq cq cq de rwm rwm. (MADX)
15016: 3HQ with p/p to 3QY via Puerto Rico (QSYed from 11175)USB from 2141-2148Z (CG).
15616.9: AXI: Darwin Meteo 1350 FAX 120/576 w/weak but readable chart showing S. Pacific and New Zealand. At 14000, w/Sea Surface Temp Analysis chart. It is apx 2kHz off the assigned freq. (MADX)
15682: UNID: MFA Warsaw 1630 Pol-ARQ 100/240 Consular tfc\Pol to Baghdad (RH2)
15737.5: Azerbaijani Railways Baku 1105 RTTY 50/500 tfc re wagon movements, most headed IZ (from) Baku, others from Kilyaza & Baladzhary AZE, in Russian cyrillic (ML)
15867: RAY: UNID U.S. Customs Service 1758 MIL-STD 188-141A/USB w/sounding call. (MADX)
15867: I62: UNID poss US Customs Service 2012 MIL-STD 188-141A/USB w/sounding call. Again at 2058z. (MADX)
15867: CS3: U.S. Customs Service 2250 MIL-STD 188-141A/USB w/sounding call. (MADX)
15898: RFGW: MFA Paris 1615 FEC-a 192/400 Lat/Long co-ordinates to Milfrance Dakar, Rabat & Cap Vert. Plane down? Ship distress? (RH2)
16014: RFQP: FF Jibouti 1850 ARQ-E3 100/400 CdeV on RUN cid (RH2)
16014.2: prob RFVI: French Forces, Le Port 1310 ARQ-E3 100/380 idle. (MADX)
16014.2: RFVI FF Le Port 1027 ARQ-E3 100/400 returning CONTROLE DE VOIE msg (OO RFQP DE RFQP) to Jibouti, cct RUN (ML)
16084: E03: Lincolnshire Poacher 1439 AM w/YL/EE/5FGs already in progress. QRT at 1445 w/Lincolnshire Poacher tune. (MADX)
16098: UNID: prob Swiss MFA 1434 SITOR-A 100/170 w/5LGs. (MADX)
16135: KVM70: Honolulu R 0641 fax 120/576 Satellite pix (RH2)
16141.7: kdakrfr: MFA Cairo 1633 ARQ Msg\AA to Accra (kwfk)& Addis Abeba (kykyk) (RH2)
16150: YT316A: PRC Embassy Moscow 1258 MIL-STD 188-141A/USB wkg ZT201A:PRC MFA ? then into MIL-STD 188-110A. (MADX)
16150: UNID: Russian FAPSI 1306 CROWD36 in IRS mode. (MADX)
16160.5: UNID: British F&CO 1921 PICCOLO-12 encrypted. (MADX)
16180: UNID: Russian Military 0707 81-81 40.5/500 encrypted. (MADX)
16278.8: UNID: Algerian Diplo 1418 COQUELET-8 26.67 w/plain-

text tfc. Started to fade out around 1427 and synch lost. (MADX)
16320.7: RFTJ: FF Dakar 1822 ARQ-E3 100/400 CdeV on TJD cid (RH2)
16332: V5G: Romanian MFA 1100 CW w/call tape then into ROU-FEC 164.5/380 on-line encryption. (MADX)
16332: V5G: Romanian MFA 1340 ROU-FEC 164.5/400 on-line encrypted. At 1355, into plaintext tfc. Bitmask=24. QRT at 1402 into CW. (MADX)
16340: UNID: Algerian Diplo 1254 8-tone MFSK in callup mode. (MADX)
16340: Algerian Diplo 1409 8-tone MFSK w/callup mode. (MADX)
16340: UNID: Algerian Diplo 0815 8-tone MFSK in callup mode. (MADX)
16347: FAAZMP: ARTCC Minneapolis 1509 MIL-STD 188-141A/USB w/sounding call. (MADX)
16351.7: UNID: prob RFFA: French MOD 1442 ARQ-E3 192/400 idle. (MADX)
16351.7: RFFA: MOD Paris 1609 ARQ-E3 192/400 Betas (RH2)
16453.9: HGX?: MFA Budapest 1610 Dup-ARQ 125/170 Good synch but just caught end (RH2)
16456: UNID at 0045 in USB. Two women chatting in English. (RW)
16606: UNID: UK MilCyprus 1600 MFSK 195.3/300 (RH2)
16630.5: UNID: UNID at 1805 ARQ Marker. No ID - not listed! Strong sigs! New freq. (RH2)
16710.5: UAZX TR Izumrudnyj Bereg 0945 ARQ msg to Murmansk, 53068 UAZX s/off (ML)
16713: UCHR NIS Eduard Toll 0911 ARQ svc msg to Vladivostok (ML)
16713: UGDX LK Moskva 0902 ARQ svc msg to Vladivostok (ML)
17050.5: ASK Karachi rdo 0830 CW WX for N Arabian Sea, Gulf of Oman, Persian Gulf & NAVAREA IX wng (ML)
17428: M12: 1456 CW sending "864 864 864 1" at 16wpm. At 1457, switched to 31wpm w/555 (x5) 27 then into 5FGs w/cut 0. QRT at 1505 w/000 000. (MADX)
17441.5: 5YE: Nairobi Meteo 1622 RTTY 100/850 WX codes (RH2)
17441.7: MFA Cairo 1716 ARQ 5LG to unk Very close to 5YE! (RH2)
17460: UNID: Russian Navy 1453 36-50 50/240 encrypted. (MADX)
17484: CCM: Chile Navy Magellanes 1650 RTTY 100/850 5LG to unk (RH2)
18003: GTL: Thule AFB 0647 MIL-STD 188-141A/USB w/sounding call. (MADX)
18183.4: 7RQ20: MAE Algiers 1624 Coq8 26.67 Msg\FF to Ambalg Kinshasa (RH2)
18200: JMH5: Tokyo Meteo 1753 fax 120/576 Good chart! (RH2)
17421.7: PWX33 Brazilian Nvy Brasilia 1010 FEC clear TX msgs in Portuguese & encrypted msgs of unbroken lines of ltrs & figs, ended w/PWB44 DE PWX33 INT ZEV (rqst acknowledge) K's (ML)
18277.2: 8WB3 Indian HiCom Pt Louis MAU 1010 RTTY 50/400 clg & testing to 8WD6 New Delhi, no tfc (ML)
18308.5: RFGW: MFA Paris 0956 FEC-A 192/400 w/offline-encrypted msg (5LGs). (MADX)
18571.5: OLP: UNID Tunis Diplo 1611 FEC "DCE DCE de OLP OLP" + call strings (RH2)
18594: RAY: UNID USCS 1639 MIL-STD 188-141A/USB clg FL1: UNID USCS. (MADX)
18594: RAY: UNID US Customs Service 1758 MIL-STD 188-141A/USB w/sounding call. (MADX)
18296.7: RFQP FF Jibouti 1218 ARQ-E3 100/400 CONTROLE DE VOIE(OO RFQP DE RFQP) to Le Port, cct DJI (ML)
18780: Russian Railways Ministry (MPS) Moscow 1200 RTTY 50/500 op msgs in Russian cyrillic (ML)
18966.7: RFHJE: FF Papeete 1030 ARQ-E3 96/400 Betas & VZCZ reoeated (RH2)
19036.5: UNID: Ambalg Kampala 0940 Coq8 26.67 Msg\FF to MAE

Algiers (RH2)
19230: UNID: MFA Copenhagen? 0640 Twinplex 100/400 In IRS mode — no TX. Also on 19621.7 kHz (RH2)
19233: UNID: Russian FAPSI 0926 CROWD36 40.1bd (MADX)
19237: UNID: prob Italian Diplo 1608 RS-ARQ 228.5/170 w/tfc. Unable to decode this mode, so ident is presumed. (MADX)
19320: UNID: prob Czech Diplo 1459 MIL-STD 188-110A + CW and voice. (MADX)
19638: A9C: Bucharest, Roumania 13.10 FEC-A 192/400 French embassy with svc tfc to P6Z, Paris (PT)
19643: N2G French Emb San'a 1040 FEC-A 192/400 5LG msg (ML)
19692.5: ZSC: Globe Wireless Cape Town 2021 Globe Wireless PACTOR II mode. (MADX)
19862: MGJ: RN Faslane 1654 RTTY 75/350 Carbs (RH2)
20041.7: MFA Cairo (JG BKFQSR KDAKRFR) 1140 ARQ long msg, in ATU-80, to unnamed Emb (ML)
20043.5: UNID: prob Bulgarian Diplo 1234 8-tone MFSK 240hz between tones. (MADX)
20179.7: prob RFFA: MOD Paris 1928 ARQ-E3 100/380 idle. (MADX)
20179.7: RFFA: MOD Paris 1404 ARQ-E3 100/380 w/5LGs. (MADX)
20179.7: RFFA: MOD Paris 1600 ARQ-E3 100/400 Scrambled tfc\FF re U.S. fleet ops! Nuke Carrier Enterprise & others mentioned. Also on 20633.7 kHz (RH2)
20304.7: UNID: Egyptian Diplo 1355 SITOR-A 100/170 very weak. "kbs huxd" was readable. QRT at 1401. (MADX)
20336.5: UNID: 1933 UNID 100/850 encrypted. (MADX)
20597: STFADW: SITFA Station Andrews AFB 1440 MIl-STD 188-141A/USB clg TWC1: US National Guard Aviation unit. (MADX)
20633.7: prob RFVI: French Forces Le Port 1938 ARQ-E3 100/380 idle. (MADX)
20840: UNID: 1945 USB YL/OM w/Italian chatter. (MADX)
20850: A9C: Bucharest, Romania 14.25 FEC-A 192/850 5-lg to Paris with character substitution (PT)
20855: C3P French Emb Tokyo 1005 FEC-A 192/850 w/OO P6Z DE C3P 3241006 ZNR UUUUU QRU VX A TOI FEU, then QRT (ML)
20890: RAY: UNID USCS 1639 MIL-STD 188-141A/USB clg FL1: UNID USCS. (MADX)
20890: RAY: UNID U.S. Customs Service 1759 MIL-STD 188-141A/USB w/sounding call. (MADX)
20936.5: UNID: UNID Tunisian Diplo 1536 FEC 5LG after "08807 Etoile" (RH2)
20942: S97: Swed Emb Abidjan 1415 Ale/USB to SOO/Stockholm (RH2)
20942: SOO: MFA Stockholm 1458 Ale/USB to S97/Abidjan (RH2)
20946: 8BY: French Intelligence 1346 CW w/"vvv vvv de 8by 8by 455/308/673/739/302" (MADX)
20958: S12: Swedish Embassy Bogota 1735 MIL-STD 188-141A/USB w/sounding call. (MADX)
20960: UNID: 1940 USB SS operator w/pp tfc. (MADX)
20986.5: UNID 1340 PACTOR II (MADX)
20936.5: UNID: Tunisian Diplo 1629 FEC 5LG (RH2)
21865: UNID: MFA Warsaw 1525 Pol-ARQ 100/240 Betas only! (RH2)
22857.7: RFVIE: FF Le Port 1033 ARQ-E3 100/400 Betas on VII cid to Noumea (RH2)
22912.7: RFHI: FF Noumea 1036 ARQ-E3 100/400 Betas on HII cid to Le Port (RH2)
22912.7: RFVI: FF Le Port 0736 ARQ-E3 100/400 CdeV to itself and again at H+36 (RH2)
23190: P6Z: MFA Paris 1725 FEC-a 192/400 Calling S5F/Brasilia (RH2)
23190: P6Z: MFA Paris 1020 FEC-a 192/400 Clg N2G/San'a (RH2)
23195.5: UNID: British F&CO 1905 PICCOLO-12 encrypted (MADX)
23214: RAY: UNID USCS 1639 MIL-STD 188-141A/USB clg FL1: UNID USCS. (MADX)
23214: RAY: UNID USCS 1640 MIL-STD 188-141A/USB + USB wkg CS2: USCS Service Center (self ID). (MADX)
23214: 13L: UNID USCS 1651 MIL-STD 188-141A/USB w/sounding call. (MADX)
23214: RAY: UNID US Customs Service 1759 MIL-STD 188-141A/USB w/sounding call. (MADX)
23337: HIK: Hikam AFB Hawaii 2024 MIL-STD 188-141A/USB w/sounding call. (MADX)
23370: HZN: Jeddah Meteo 1619 RTTY 100/850 WX codes (RH2)
23458: UNID: FAPSI 1046 Crowd36 Mazielka calls (RH2)
23523: JMH6: Tokyo Meteo 1740 fax 120/576 V/ clear chart!! (RH2)
23526: S93: Swedish Embassy Havana 1444 MIL-STD 188-141A/USB w/sounding call. (MADX)
24370: RFGW: MFA Paris 1330 FEC-a 192/400 5LG Embassy Circular (RH2)
24370: RFGW: MFA Paris 0644 FEC-a 192/400 Msg/FF re air missions to Syria & Egypt (RH2)
24537: UNID: MFA Rome? 1020 RS-ARQ 228/170 Some Italian words mixed in with ASCII like garbage! Ends "629 nulla quest. Modena Nr700 del 03 08 201"m (RH2)
25143: UNID NATO ? 0750 RTTY 75/850 online crypto after RY's VMGTCNJBH (ML)
25186: ASI: UK Mil Ascension 0923 Ale/USB SND (RH2)
26441.7: RFFAAG: Paris 11.05 ARQ-E3 100/400 Tfc in FF from DIREND OE SDO PARIS to RFVITT/AIG16411 carried on IRE, Paris — Reunion cct (PT)
26441.7: RFVI: FF Le Port 1705 ARQ-E3 100/400 CdeV followed by Paris (RH2)
26660: UNID: prob Swedish MFA 1430 USB clg UNID station in Swedish. (MADX)

This month's contributors:

Bert van Rij Naaldwijk —Holland
Chris Gay — KU4A
R.C. Watts — ColonelDX, Louisville,Ky.
MidAtlanticDXer — Maryland
Murray Lefman
Peter Thompson — North Wales, UK
Robert Hall — Capetown, SA
Sue Wilden — Noblesville, Indiana

Thank you all very much for your good work — as always it is very much appreciated.

Send Us Your Stories

I just wanted to thank David Hopcroft again for his contribution. It's good to read stories like this, because it reminds us about the people who came to make up the radio industry during the 20th century. Let's not forget them, as many helped make the world a safer place to live in. Certainly they all helped to make communications between people much easier and faster.

As I've said before, I really would like to receive stories from more *Popular Communications* readers. Don't worry about the material being perfect. I'm more than happy to sit down with your notes and turn them into the final words. What is important is to preserve this information so that future generations can appreciate what it was like to be a radio operator, or listener, during the different points of historical development of this wonderful medium called radio.

Until next month, may all your radio-monitoring sessions be productive and enjoyable! And don't forget our fighting forces overseas and at home, as well as the security people — be they police, firefighters, or ambulance attendants — who are working every day to keep our communities safe. ■

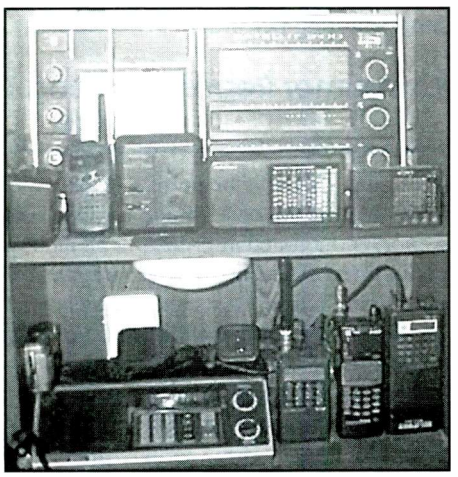
v.i.p. spotlight

Congratulations To Roger Johnson Of California

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, grammar, and 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: "V.I.P Spotlight," 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. Please print your return address on the envelope if using the postal mail system. Not doing so will delay your submission being processed. If you're E-mailing photos, please send them in a separate E-mail with your name in the "subject" line.



A look inside Roger Johnson's radio shack. →

Our March Winner: Roger Johnson Of Lytle Creek, California

Our March winner, Roger Johnson says, "I started in radio by going to an adult-ed night school class for radio theory. This turned out to be a training ground for wanna-be ham radio operators. I got my first ham license when I was 13. At the time in 1973, I missed being the youngest person to get a ham ticket by two months (this is before the no-code tech category). By the time I was 18, I had worked 50 countries.

As a teenager I worked as a TV repairman, and as an adult I made a living installing car stereos, alarms, and two-way radios. I'm a rare breed. Most hams & CBers don't get along, but I enjoy both as well as SWLing, and monitoring of all sorts.

Ever seen a computer in a car? No, I don't mean a laptop. I mean the tower mounted remotely in the trunk, with a keyboard mounted on the transmission hump and a monitor under the dash. I don't have Internet (yet), but I can do packet radio on 2-meter ham.

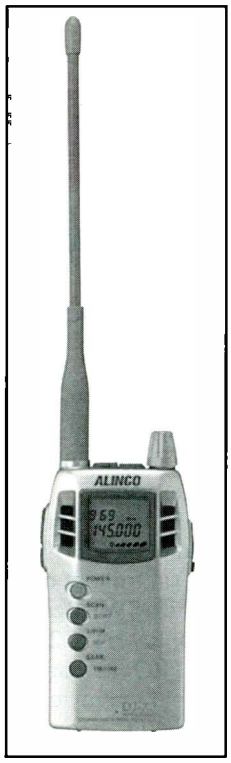
My 'radio shack' consists of: Grundig Satellit 2100 (SW), Audiovox FR-130A (FRS), RS active antenna/antenna amplifier (in front of my ham license), RS DX-397 (SW), Sony ICF-SW20 (SW), Bearcat 210XL (the first truly programmable scanner), RS HTX-202, Alinco DJ-X10 (what a versatile rig!), and RS PRO-42 scanner. If you think my bench has a lot of rigs, you should see my car!

The PC is running the STS Plus program for tracking earth-orbiting satellites. It gives the constantly changing frequencies for u/link & d/link with the shuttle and the International Space Station. It's freeware available at www.dransom.com/stsplus.html." ■

The triple conversion IF stage provides excellent reception.

The DJ-X3 can reproduce FM stereo when optional stereo headphones are connected to the unit. The operator also has four selectable antenna choices: an internal AM bar antenna, a shortwave bar antenna, the earphone cable may be used as an antenna or the SMA whip antenna terminal can be activated. The DJ-X3 is supplied with a removable whip antenna, but an external antenna can also be connected to the SMA port. An attenuator function is available to reduce very strong signals. The receiver also has a "bug" detector, useful in searching for hidden transmitters.

The DJ-X3 has three operating profiles, VFO, preset AM, FM, and TV frequencies and the memory mode. The operator can make manual selections or scan in any of those modes. In the memory scan mode, the operator can choose one specified bank; certain banks can be linked for scanning or one can choose to scan all banks. There are 20 program and memory scan options.



The new Alinco DJ-X3 is a super new scanning receiver with lots of exciting new, innovative features.

The new Alinco DJ-X3 is capable of tuning in user-defined steps of 5, 6.25, 8.33, 10, 12.5, 15, 20, 25, 30, 50, and 100 kHz. The unit also has an AUTO step mode that selects the appropriate step for the band currently in use. The illuminated display is large and easy to read. In addition to frequency information, it will also show the operating mode, memory channel, battery strength, signal strength, and a number of other user-selected operating parameters. A charger, belt clip, and strap are also included. The DJ-X3 can also "clone" to other DJ-X3 units, sharing its programmed parameters through a wire connection.

"The DJ-X3 is an exciting new addition to our growing line of receivers," said Mr. Cota. "It is a great performer in a compact package. Along with the DJ-X2000, DJ-X2, and the DJ-X10, Alinco now offers the monitoring enthusiast a wide range of choices in receivers in different price ranges."

The DJ-X3 is expected to be available in stores soon. MSRP is $302.95. Accessories for the unit, such as extra battery packs, are also available. Dealers are free to set their own prices and often sell at prices below the MSRP. Specifications subject to change without notice or obligation.

Old Time Radio From Computer Aided Technologies

OTR is an acronym for "Old Time Radio," a term loosely applied to radio programs broadcast from the dawn of broadcasting to the very early '60s. Alternate names are "radio nostalgia," "golden age radio," etc. Usually this applies to radio drama, mystery stories, comedy, and adventures. Some folks classify the resurgence of this type of radio programming in the '60s and '70s as "Revival Radio," and similar programming since then as "Modern Radio Drama." In any case, there are plenty of programs of various types that are enjoyable entertainment. Best of all, they don't require a large screen TV to enjoy 'em — the 'visuals' are provided by the listener's imagination.

If you were around during the '40s–'60s you had first hand experience with OTR. Amos 'N Andy, Fibber McGee, Jack Benny, Burns and Allen, and Bob Hope were just a few of the weekly stars. Many migrated to TV in the late '50s. Shows such as Same Spade Private Eye, Dragnet, Inner Sanctum, and Escape all starred names we know to this day such as Jack Webb, Vincent Price, and Humphrey Bogart. Most of these programs are downloadable from the Internet, but many are only available if you want to listen online. You can listen, but not download. And let's face it, downloading from the Internet takes a lot of time and resources!

Computer Aided Technologies has a nice selection of CDs selected from over 15 gigabytes of MP3 and Real Audio Files. All are jam packed full of OTR files. Each CD has over 60 of your favorite Old Time Radio programs and all are categorized by type of material. Select CDs that contain comedy, detective, drama, mystery, Sci-Fi, Super Heroes, Western, and more. All CDs include the latest RealPlayer and WinAmp Shareware Software.

For more information, contact Computer Aided Technologies at scancat@scancat.com or call toll free in the USA 888-722-6228. Outside the USA, call 318-687-4444 or FAX 318-686-0449. The company accepts International Money Orders, Visa/MasterCard (CODs and checks only in USA) at Computer Aided Technologies, P.O. Box 18285, Shreveport, LA 71138. All CDs are $29.95, plus $5 shipping/handling per order ($7.50 foreign).

Consumer Reports: Analog TV Sets Still Best Choice

Digital TVs may be getting more attention, but conventional TVs are still the best choice for everyday viewing, *Consumer Reports* concluded after testing 38 analog and five digital models in three different sizes in their December issue. The recent issue included full tests and ratings of 25 DVD players and 14 VCRs, along with the latest developments in digital video recorders (DVRs).

Top-notch picture quality is the most affordable it has ever been, but shoppers looking for a new set must still confront nagging questions: How soon will a conventional analog TV become obsolete? Should you hedge your bets with an "HD-ready" set, which can also accommodate high-definition broadcasts? Or is it time to consider a full-blown, wide-screen HDTV?

Consumer Reports found that a conventional analog set is still a good bet for most consumers. Judging by how slowly the transition to digital broadcasts has proceeded, any analog TV set you buy now will serve you well for many years. CR's tests of more than three dozen such sets, including 27-, 32-, and 36-inch sizes, shows there are plenty of fine TVs to choose from, including some real bargains.

For more information on *Consumer Reports*, call 800-234-1645. Information and articles from *Consumer Reports* can be accessed online at ConsumerReports.org. ■

technology showcase

new product performance analysis

by Peter Bertini

The Ham Radio Magazine CD ROM Collection

In a joint effort, CQ Communications, Inc., the publisher of *Popular Communications*, and the American Radio League are now offering the entire run of *Ham Radio Magazine* in CD-ROM medium. *Ham Radio Magazine* was born in 1968, and under the editorial guidance of the late James Fisk W1HR, soon became Amateur Radio's premiere technical journal, until it ceased publication in 1990.

The magazine has been organized into three sets of **four CDs**, one set covering the early years from **1968 to 1976**, the next set spans from **1977 through 1983**, and the final set covers the last six years of publication from **1984 to 1990**. Every page, ad, and cover has been scanned and reproduced. It's all there. There are some minimum system requirements: Pentium or equivalent IBM compatible PC, 16 MB RAM (32 MB recommended), at least 6 MB of free hard drive space, a minimum 800 x 600 256-color video display, CD-ROM drive, operating under Windows 95, 98, NT 4.0, ME, or 2000.

ARRL's Aview program is included with each set, and once installed permits searching articles by title and author, or by year and issue, or simply browsing through individual articles and columns. I had the honor of donating a large portion of my *Ham Radio Magazine* library for this project, and what once previously occupied several feet of valuable shelf space is now represented by 12 small CDs. Each 4-CD set retails $59.95; but the full collection is being offered at an introductory special for $149.95. The Ham Radio Magazine CD collection is something that has been long overdue and anticipated — what an asset to anyone with a technical interest in radio communications! The CDs are being carried by select dealers, or may be purchased from the ARRL, or CQ Communications, 25 Newbridge Road, Hicksville, NY 11801. For telephone orders call 516-681-2922 or via FAX at 516-681-2926. Be sure to tell them Peter from *Pop'Comm* sent you their way! ■

truck is in first-class shape, because if you break down there will be no one stopping to help you. Well, thank you for letting me rant for a while I feel a little better now, even if you don't print this letter.

Bill Benstead,
Toronto, Canada

Let's Stick Together

Dear Editor,

I just received my August issue (I was out of town) and was pleased to see so many readers standing up for 11-meters, especially ham operators. I've been hearing more and more ham operators coming clean about their true love for the 11-meter band, after all, this is where they most likely got their start! I think that radio operators need to stick together instead of splitting apart based on the band of operation. We're all in radio for one thing and one thing only, our shared love for radio. With this being said, I want to thank the two readers, Rob Farley of New Hampshire, and ham operator Warren KB2VXA, for stating their points about what is going on and what needs to be done with the 11-meter band. Maybe if enough letters about what the FCC should do on the CB band are printed, they just might reignite the initiate a clean up program.

The CB band is a fun band to work on and is also a rewarding band for those who want to shoot DX (legally). The whole "logic" that takes place on the 11-meter band is what I call cigol (backwards logic). Here's what I mean. Why do people usually run illegal power on CB freqs? So they can be heard over all of the noise and make a couple of distant contacts, of course. But more frequently it's to feel like they have some sort of control. Where is all of the noise coming from? Other illegal stations! Oh! So let's run higher power to get over the even louder noise. Next thing you know, the whole frequency is shut down and no one can talk. Come on FCC, let's put the mirror on this issue and turn the cigol back to logic. I love the CB band and I would like to see it return to its legitimate state. This of course can only be done if the FCC decides to actually enforce the rules! Oh, and of course some modernization would be nice too.

CB user, Jason
73's
333 SSB (27.385 LSB) celticmagick AM

Dear Jason,

It's still important to point out that according to current FCC rules (which we tried in vain to get rescinded with RM-9807) it is still illegal to communicate over 155.3 miles. When skip conditions are good and an otherwise legal operator decides to "shoot skip" or inadvertently finds him or herself talking to a station 1,000 miles away, we've got one of those "hot button" topics that'll never go away, at least in my lifetime.

Bungling BBC

Dear Editor:

It was so fitting that I arrived home from work today to find the July issue of *Popular Communications* waiting for me with the headline "Shortwave's Future" on the cover. Only a few hours earlier, I learned that the venerable BBC had decided to end shortwave transmissions of its beloved World Service to North America by June 30th, opting instead to deliver its programming to the U.S. and Canada via the Internet and satellite relay via Public Radio.

I am by no means tradition-bound (frankly, I come down firmly on the side of no-code for amateur radio), but this move disturbs and saddens me deeply. The problem is, in the unrelenting drive to cut expenses and trim fat in recent years, just about every company, government institution, and public entity in the western world is cutting into muscle and even hitting bone. And make no mistake, for the Beeb, shortwave is definitely muscle and bone.

The BBC has apparently decided that everyone in the U.S. and Canada is wired to the Internet. I have Internet access, but I know a lot of people who do not. What's more, the Internet is hardly a bastion of reliability when it comes to streaming audio and/or video. One requires higher-priced broadband service and a very recent computer model to obtain what could be considered reliable Webcasting. That amounts to more than a thousand dollars for the new computer and $20-$30 more per month for faster Internet access. My three excellent shortwave receivers, already bought and paid for, just won't get the job done anymore — at least when it comes to the Beeb. There are other problems: What happens if I don't want to listen in the bedroom where my computer is tethered to its Web connection? What happens if I want to listen in the car? Then we come to distribution of BBC World Service programming via Public Radio here in the U.S. What happens if I can't tune in when my public station has decided to schedule the Beeb? In many cases, BBC News Hour is carried once very early in the morning and again very late at night or overnight. Even if the new direct-satellite broadcasters, XM Radio and Sirius, carry the BBC, it will cost $10-$13 a month in addition to the cost of purchasing a satellite radio with a price tag of a few hundred dollars. Obviously, our friends at the Beeb are convinced that Americans are a very wealthy lot — or at least most of us. If a few of us are not, well, that's too bad, isn't it?

My point is this: Streaming programming via the Internet is an excellent way for the BBC and other international broadcasters to augment shortwave and satellite transmissions. But to simply eliminate shortwave in favor of Webcasting — for an entire continent — is a mistake, because the technology being relied upon isn't as seamless and reliable as many believe.

The fact that the BBC is the one doing this is even more upsetting because the Beeb is the Rolls Royce of international broadcasters. If they do it, others will follow — regardless of what they may say now. Tragically, that means fewer people will listen.

Steve Biro
Freehold, NJ

Dear Steve,

Fine points, well made! But I live about 10 miles from you and get the BBC very well, day and night on a small portable Sangean receiver in my living room, and in the shack on an R8B. They're not as strong without that outside antenna as they once were, obviously, but they are there and reasonably audible.

This whole streaming audio/video Internet thing is a slick operation, but like millions of radio users, my shortwave receiver operates when the power is out, when I travel, move to another room, and it's free. Ahhh, yes, that almighty dollar might be part of the problem.

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speak English, your lips move and they see you, but *they* hear and see something else — something only they can see.

A Classic Example

I've never met the FCC's Kathleen O'Brien Ham, Deputy Chief, Wireless Telecommunications Bureau, but I'm sure she's a well-meaning, nice person. Personally, I don't think she could distinguish an FRS radio from a roll of duct tape if it were labeled with neon-glow letters. I call it the DolanPloog Syndrome. Those that know me will understand. (If you don't, please bear with me, substitute your own odd name, and laugh anyway). Dixon's and Leef's original petition sought to amend Part 95, Subpart B of the FRS rules to establish 462.5625 as a National Calling Channel in order to, as their petition stated, **"To better facilitate communications involving personal safety, traveler's assistance, and emergency communications, and to enhance the functionality of the Family Radio Service."** Pretty decent request, I'd say. Even though it was submitted to the FCC in October 2000, a full year before the tragic events of September 11, 2001, Ms. O'Brien Ham's denial was adopted December 5, 2001 (and released two days later), a full *three months* after 9/11. Chalk it up to another missed opportunity at the FCC, and a chance to wave the flag — not just Old Glory, but a unity flag, saying, "we're in agreement with Alan and Bob, that there are so many of these radios out there, what a grand time to come together and recognize that emergencies can happen anywhere, anytime, and ANYTHING we can do to help people, we should do." Nope, once again, the DolanPloog syndrome takes over, and we're given the following explanation from Ham: "The Commission noted that because the universe of potential users of the FRS is the American public, it believed administration of the FRS should be accomplished primarily through establishing transmitter technical standards rather than complex operating rules."

Can Ham explain what would be so complicated about merely informing FRS users that FRS Channel 1 would have been set aside as a national calling/emergency channel, and that it shares a common bond with the General Mobile Radio Service (GMRS) by the FCC's own rules (GMRS — FCC Part 95, Subpart A) allowing for monitoring and communications between FRS and GMRS units, should an emergency occur? In their petition, Dixon and Leef note that, " . . . the establishment of FRS Channel 1 as a calling channel imposes no burden on existing FRS users since all existing FRS radios capable of Channel 1 operation may continue their normal, routine operation on said channel, yet may immediately utilize the channel as a calling channel, and . . . future design and manufacture of FRS radios capable of multichannel scanning with Channel 1 as the priority scan channel will open new equipment marketing opportunities for manufacturers."

It only seems logical (oops, there I go again!) that with the 14 available FRS channels and with the 38 CTCSS squelch codes offering a possible combination of 532 communications channels to establish contact, that in telling the public, "OK, folks, if you need help or wish to call another unit, we'd recommend using Channel 1 with no programmed CTCSS privacy tones because you'll greatly increase you chances of making that necessary contact." Period. Their petition required no action on the part of manufacturers, although let's face it, future FRS radios (the FCC themselves has left open additional operating modes other than standard FM), *could* incorporate a simple red-colored Channel 1 pushbutton which would certainly get folks' attention if they're thinking about emergencies. Remember, families buying these radios for staying in touch and for safety reasons!

So, let's look at the rest of Ham's explanation (and frankly one has to wonder if she's operating unilaterally, not just because of this decision, but a couple of others as well) for her denial. I'm also not sure Ham actually thoroughly read (or understood) the petition because in her denial she says, "As noted above, the Commission previously considered whether, as a transmitter technical standard, to require manufacturers to include certain specific features in FRS units. We disagree with the petitioners that additional FRS transmitter technical or operational rules are needed."

Did I miss something or did Ham? The petition is NOT asking for any new "transmitter technical standard."

She further says, "The petition has not established that the current technical rules are inadequate in some way or that the purpose of transmitter technical standards is not being met."

You're kidding, right? Let's go back to the original petition for a moment and read it together. In their summary, the petitioners said, "A common calling channel, with standard, default carrier-operated squelch use, and standard Frequency Modulation (FM) F3E emissions would immediately enable rapid emergency contact for all FRS users with no retrofit or obsolescence of existing multichannel FRS radios." It seems to me that if the rule had existed in the first place, the petitioners wouldn't have filed their request, right?

Now, her next sentence, in **Section Number 8** is most troubling and probably direct evidence that what I've said for years is true: There's something funny going on in Washington; the air, water, and Twinkies or cheeseburgers aren't made of the same things as those in the rest of America. Ham says, " . . . we believe that such a channel in the FRS is unnecessary given that FRS is intended to be used by small groups of persons and that the transmissions from FRS units would be receivable only over a very small area. For these reasons, we do not believe that establishing FRS Channel 1 as a universally recognized common calling channel is necessary or consistent with the purpose of the FRS."

I remember years ago — and perhaps you do too — how the FCC held onto those CB rules vehemently stating over and over how people engaging in long-distance communications and even conducting "hobby-like" communications on CB was **"inconsistent" with the rules and regulations**. Nevertheless, it took many years for the FCC to do an about face, finally allowing the use of "handles" and hobby radio communications.

Later, in **Number 11**, Ham says, "We also disagree with the Petitioners' claim that the proposed rule changes would impose no measurable burden on any party concerned. To the contrary, the proposed rule changes would impose a burden on manufacturers of FRS units because a manufacturer would have to design its FRS unit to include specific new features and capabilities that are not mandated by the Commission rule today."

Not so, Ms. Ham. Once again, was the original Petition even read and understood? I think not. The Dixon and Leef petition said that " . . . this petition seeks immediate official recognition of the use of default carrier-operated squelch as the proper operating technique for those stations wishing to monitor FRS Channel 1 for calls from any other FRS station . . . seeks immediate official recognition of the use of standard Frequency Modulation F3E voice modulation . . . as the proper operating mode for those stations wishing to initiate contact on FRS Channel 1 to other FRS stations."

Clearly, the petition doesn't seek to require folks to use Channel 1, nor does it seek to require manufacturers to really do anything. All they asked was a little common sense and caring, and what they got was a door slammed in their face. Ham's inaccurate interpretation of the request and therefore, inaccurate Order is unfortunate at a time when people are up to their ears with bureaucratic mumbo-jumbo.

Ham, in speaking for the FCC, apparently shares that steadfast near death-grip on those FCC rules and regulations, and an absolute reluctance to rewrite them once they're established. I seriously would have thought that even they would have become more sensitive to peoples' needs after September 11. I see I was wrong. ■

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loose connection

radio communications humor

by Bill Price, N3AVY

Small Town Life on the Internet

I hope you will read this column, as I have given up my winter vacation to write it. Also, I called off the trip, cause I found out you can't hitchhike to the Bahamas. As you may know (big publishing secret here) the words you read on these pages are not written the day before you get them in your hot little hand. *Au contraire,* these words were written on the day after Christmas. I have picked at a ham carcass and nibbled the edges of chocolate chip cookies all day, and I'm still wearing my slippers.

Okay, show of hands, please! How many of you are hams? Hmmm. More than I thought. That's good. Okay, of the rest of you, how many know roughly what ham radio is all about? Good. Just to bring the rest of you up to speed, besides getting to twist dials and press buttons, ham radio operators get to communicate with people all over town, all over their state,their country, and in many instances, all over the world. It began with Morse code and tubes, and has developed into sophisticated digital communications and transistors, and in some ways even resembles e-mail. As a hobby, ham radio has probably ranked number one in its requiring hard-to-find gadgets that you can only find in a big city or in the trash heap at a major military installation.

At one time, ham radio was the only hobby in which you could find yourself needing something very odd, and use the hobby itself to get what you wanted. You get on your radio, or your teletype, and let everyone know that you needed a left-handed 6L6 tube. You need it in a hurry, if someone can help, you sure would appreciate it and be glad to pay for it.

Pretty soon, you get a call from someone who has one, or has located one, and they'll stick it in the mail to you. Or maybe they live across town and can drop it off on the way to the store. Awfully convenient. You probably pitied the poor stamp collectors who could yell into a stamp for hours and never get an answer. You were glad you had chosen ham radio as a hobby.

I suppose a bicyclist could get onto his bicycle and ride to other bicyclist's homes and beg a part (so long as it wasn't an urgently needed tire), but in general, the only hobby where a person could beg a part or a gadget was ham radio.

Some of you know that I play harmonica. Well, now all of you do. I enjoy the harmonica so much I hang around on three harmonica list-serve groups on the Internet. I also repair them, customize them and have even sent Morse code on them - though not over great distances, except for one time on a long distance call to another ham.

So today, an urgent call for a harmonica part came in via the Internet. Always ready for just such an emergency, I sprang to action, dashed to the post office and send some spares to a fellow harmonicist in Pennsylvania. What's interesting is that this fellow once toured with Jerry Murad's *Harmonicats.* If this were ham radio, today's event would be like Hiram Percy Maxim dropping by and asking if he could borrow a cup of tubes!

The camaraderie that was once exclusive to amateur radio (and sometimes CB radio) is no longer exclusive to the airwaves. Amid all the pop-up ads, the online casinos, and the dial-a-sheep services, the Internet has brought - to those who want it - that same brotherhood (should I say *siblinghood* here?) to any group of people who has a collective mindset to develop and encourage it.

Just on the newsgroups where I have been a participant, I have seen good friendships grow, and a sense of community that is second only to a good extended family or religious congregation. Just like the ham radio community, when a person finds out another member is traveling near their home, the invitations go out for face-to-face meetings, and like the hams, guests are invited to ìstay overî and save the motel costs.

Some groups develop an attitude that yields:

"I need one of these."

"I've got one of those. I'll send it to you."

"How much you want for it?"

"Don't worry about it. I'll get you next time."

And that's just how small life used to be. And neighborhoods in big cities. And amateur radio clubs, repeater clubs, and field-day celebrations.

So while I'm still dragging Christmas gift-wrap and ribbons on my slippers as I shuffle through the house, I'm reminded of this "worldwide neighborhood" which began as ham radio, back when the first QSO was made and perhaps W1AW himself invited someone to "be sure to stop in if you ever get near here."

I know the spirit of giving has always been alive between hams. The "Elmer" tradition - the act of a seasoned ham taking a newcomer under his wing, help set up a station, and inevitably end up giving the new guy a whole bunch of useful necessities - that all started with ham radio. My friend, Norm has given me so much over the years I can hardly count it, let alone find a place to store it. And the porch light is always on for him when he comes to Cowfield County, and likewise for me when I head north to a place 40 miles past the last paved road.

I'll always be too grumpy to tell you to "practice random acts of kindness" and all that hippy stuff, but I'll tell you this: If you're not happy enough, just go out and do something nice for someone. Works for me.

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