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# POPULAR COMMUNICATIONS

JANUARY 2002

## Now Is The Time:

## Buying The *Right* Radio To Hear The Action!

**9-11 Myth Or Fact? Conversation**

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**Stay In Touch, Stay Safe: New License-Free  
Radio Keeps You In Touch...pg. 28**

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- RadioShack Trunk Tracking Scanner
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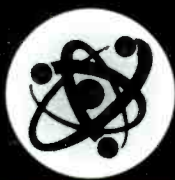
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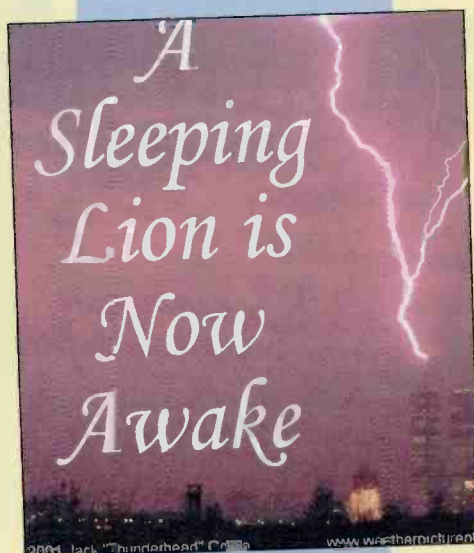
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### On The Cover

A National Guard soldier on duty at the Sarasota-Bradenton Airport in Florida. At work or home, it pays to know what's going on in your hometown and the world. Be sure to read Ken Reiss' "Overheard" column this month on page 32 to learn what you need to know before "Buying That First Radio." (Photo by Larry Mulvehill).

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# tuning in

by Harold Ort, N2RLL, SSB-596

an editorial

## Loose Lips?

There's not doubt that we live in the so-called "information age." Want to find out something? Go to the almighty Internet and surf away. There we find everything from maps and satellite images of our hometown, to phone numbers and shirt sizes of long-lost friends and distant relatives.

So it goes without much fanfare that you're a simple click away from looking at a map of what's left of Afghanistan and the Taliban, where their former strongholds were, the general location of our forces, and even projected troop movements over the next 24 hours, as this is being written. With a few keypresses, I can download satellite-tracking software allowing me to view constantly updated satellite locations all over the world. Granted, most of these are NOAA, amateur, and generally unclassified satellites, but the point is, we're a pretty open society — not just in America, but worldwide, thanks to the computer and the Internet. Nothing is beyond our reach, if you're patient enough to search through the tons of sites offering the information you desire. Of course that fact also raises the question of just what's authoritative — official, if you will — and bogus. God knows there's plenty of "bogus" out there for the unsuspecting, careless web surfer, including radio information.

These past weeks and months we've seen an outpouring of opinions on what we should and shouldn't release when it comes to our monitoring activities. There is, frankly, no simple airtight answer. It's just one of those topics that won't die, and one with so many voices in the mix, it's often impossible to separate opinion from fact. Fact is, it's not the Internet's fault or our computer age that has everyone in an uproar and afraid to discuss what they're hearing on the radio. The only real possible problem resulting from releasing monitoring information via the Internet online newsgroups is the immediacy. If you're a bad guy looking for information, it's surely a quick 'n easy way to get stuff.

But what is the "stuff" we're hearing? Take for example the known and published frequencies we're all familiar with; 11175 and 8992 for example. It

occurs to me that during this entire crisis, it's not just what we hear on our largely unsophisticated receivers and at our monitoring posts, but what we *don't* hear. Please don't think for one second that the strings of numbers we hear or even the CAP (Combat Air Patrol) comms are the do-all, end-all of tying our Nation's security together, broadcast in the clear for the world to hear. It then stands to reason for a thinking person that we're hearing the smallest tip of the iceberg when it comes to military and government communications, either during "wartime" or peacetime. We like to think we're at the cutting edge of intercepts, but trust me on this, we're hobbyists. The great majority of sensitive comms is done on ultra secure satellite links where Uncle can send the equivalent of War And Peace in seconds — and it's encrypted, to boot!

Any agency worth its paycheck also routinely transmits/broadcasts misleading information — yes, even two-way contacts — in an effort to foil the enemy. That's been done for years, and is certainly nothing new. They lie, hoping the Nazis, Republican Guard, and Talibans and those that support their cause catch the wrong information and act accordingly, falling into a trap.

So, essentially what we're left with is relatively routine comms, on frequencies that have been known and published long before there was an Internet, and monitored on home receivers of years-gone-by without digital frequency readout. All of this incessant whining and moaning about giving up secrets to our enemies is, basically, hogwash. Think about it for a moment as a non-hobbyist: Any off-the-shelf scanner capable of tuning 225–400 MHz receives military aircraft signals. That same scanner can monitor Air Force One flying into Newark or O'Hare if it tunes standard civilian aircraft frequencies. I've got a QSL signed by an Air Force master sergeant confirming one such reception. Will you hear George Bush speaking with his "friend" Putin discussing the latest anti-terrorist strategy? Not in my lifetime. (But if you do, please call the White House because

(Continued on page 76)

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## Vern Returns!

Dear Editor:

I know we have disagreed in the past on issues, but in fairness I must tell you that your August 2001 editorial was right on the mark. The boobs at the BBC are kidding themselves if they think their U.S. audience will be content to tether themselves to a phone line (or cable line) to hear their broadcasts. Most SWLs I know use portables anyway and move about the house. Sixty percent of my SWLing is from hotel rooms and the outdoors.

Perhaps the BBC and SRI should take a look at the tech stocks and e-business failures that are happening every day before they put all their eggs in yesterday's news. Bureaucrats and corporate dorks seem so quick to jump on bandwagons so that they may be hailed as visionaries. It might be new and different, but that is not always better.

What morons! But then again, weren't they the ones who drove the campaign to silence Radio Caroline? Had they any sense, instead of condemnation and military intervention they would have signed a contract with those talented 1960s pirates to program some of the BBC's pathetic programming blocks.

Vern A. Weiss, W9STB/WPE9GHF  
Grand Chute, Wisconsin

## Changing Red Lights

Dear Editor:

Harry's Cohen's question about a device for changing a traffic light from red to green (*Pop'Comm* July 2001) reminds me of a feature once incorporated in a portion of the traffic light system in Washington, DC. The Federal Government funded an experimental computer project for controlling the lights at many of the intersections in the downtown area and on major highways. This was called the Urban Traffic Control System (UTCS), and relayed traffic counts from the controlled intersections to a central computer that regulated the timing of traffic lights as needed.

Certain intersections on bus routes were equipped with the Bus Priority System (BPS), whereby suitably equipped buses could send out radio signals to extend the green period as they approached these intersections. I was involved in the planning for the overall system's data network as a design engineer for C&P Telephone, and found the exposure to these new technologies to be very interesting.

UTCS did go into service and operated for a while, but was abruptly canceled when the DC government failed to apply for the federal grant needed to continue the service after the developmental funding had expired. Some bureaucrat overlooked the deadline for filing for the grant on a timely basis, and the system was turned off and never resurrected in its original form.

I have also heard about a system for police and other emergency vehicles to change all lights at an intersection to red as they approach it, but have no specific knowledge of this being used anywhere.

Perry Crabill, W3HQX  
Winchester, VA

## Helping 11-Meters — Any Thoughts?

Dear Editor:

My name is Mark Pearsal and I was referred to you by a mutual acquaintance. I have read your magazine for many years, however, I must confess that I've not subscribed yet. I shall have to remedy that. I've seen that your coverage of 11-meter related topics has increased of late and I feel pretty confident that I have a good read on *Pop'Comm's* position re. RM-9807. I want to thank you for your publication's support of RM-9807. I believe that the ITU agreement regarding international comms below 30 MHz would've RM-9807 down, but the point is that the ARRL had no business involving itself in the affairs of 11-meter interests, in this case a legal attempt to "decriminalize" (for lack of a better term) a Part 95 rule. Let the League stick to Part 97, where it has its own laundry to clean.

Here's an idea that I posted on [www.qrz.com](http://www.qrz.com), [rec.radio.amateur.policy](http://rec.radio.amateur.policy), as well as a few others. I chose to post them on ham forums as well as the 11-meter boards because I know what it's like to "sandbag" a ham board because you don't want to get flamed if you post without a ham callsign. Harold, the e-mail responses from the "sandbaggers" have almost been overwhelming. The amateurs post replies of anger and outrage at the idea of being "infiltrated," but concede that they can do nothing to stop it. It seems that even "Uncle" Riley can't issue a notice of violation for utilization of a basic democratic and financial principle. Thanks again for the great magazine and your increased support of late regarding 11-meter subject matter. Keep up the good work & 73.

Hello fellow 11-meter enthusiasts,

I have a new idea. So much has been made of the fact that we (11m ops) have no real representation in DC while the amateur community has the ARRL. The USCBOA was a nice idea but seems to lack the organizational skills to get airborne. I got this idea while reading a ham forum thread where many amateurs were complaining about the ARRL allowing "chicken banders" to infiltrate the ham bands and vowing to cancel their membership. Well, here it goes.

JOIN THE ARRL! That's right; make them live up to their name. The AMERICAN (NOT Amateur ONLY) Radio Relay League. In the mid-'60s, the number of CBers outgrew the num-



ber of licensed amateurs. The price is \$39/yr. and you need NOT be a licensed amateur to become a FULL member. You DO, however, need to be licensed for voting privileges though. I know that \$39 is steep, but I've spent more on a power mic and this money REALLY does make my voice louder. The 35 multiple-choice Technician exam takes approx. five minutes to complete and the practice exams can be found on [www.qrz.com](http://www.qrz.com) as well as other popular ham sites. I'm sure there would be a bit of resistance in the beginning, but the ARRL is made up of hams that are basically...politicians. That's right folks, let the first official lose "a close one" at the hands of an 11-meter "swing vote," and see how our "concerns" take on a little more importance. Here's a bonus, when you hear an old codger cry "I'm canceling my membership," rejoice...that's called a two-for-one sale. Your vote no longer opposes theirs, it REPLACES it!

The kicker is that if you plan to be as vocal as I am, you need to run legal. I'm NOT preaching. I freebanded for over 10 years and LOVED it. However I send letters to my representatives and the FCC, so my house must be in order. Riley Hollingsworth himself can come to my QTH for a surprise visit. I sent a letter to my reps regarding RM-9807 and asked why the FCC admitted that the MAJORITY of CBers were in favor of dropping the 155 mile limit rule, yet "private interests," namely the ARRL and NAB, swayed the ruling. Not only did I receive a reply, but it included a reply from the FCC to an inquiry by my rep. Did it really make a difference? Maybe, maybe not, but I know at least three more souls know about this "voter's" displeasure.

I sent a letter to RadioShack (Tandy) in Fort Worth, Texas, about their HTX-10 and its inability to be modified at their (RS's) request. I explained that there are some who may want the capability to "monitor" (-P) the 11-meter band as well. (Particularly since RadioShack no longer offers a RS brand SSB CB anymore.) I returned mine and told them that I would gladly pay the extra \$50 to RF Ltd. for their Magnum 257 (the modifiable version of the same rig) and will now purchase all my ham study material and 2m h/t elsewhere due to their policy. Again, did it make a difference...perhaps not, but at least they know that they've lost approx. \$450 in sales, plus restocking costs.

Remember, to be this vocal, you need to fly right. I miss freebanding and it gave me many hours of pleasure over a 10-year

period, this is the best way I can give back to 11 meters. If you don't plan to quit freebanding, don't be too vocal and run a "common sense" set-up. Your ARRL vote still counts! I never ran amplifiers and worked the world with a Clear Channel Ranger AR-3500 (30 watt model) and a two-element yagi. I also successfully encouraged many of fellow 11-meter ops to do the same. (Tech license,

ARRL membership, & write reps.) It kills me when I hear hams flame us and there's little we can do because we don't want to attract the unwanted attention. Well, sometimes you have to defend yourself with the weapons the opposition gives you. The ARRL rates recently went up, you should hear the hams crying and threatening to cancel — go for it, I say!

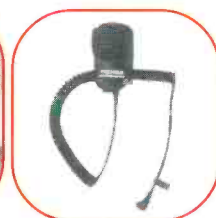
73 de Mark

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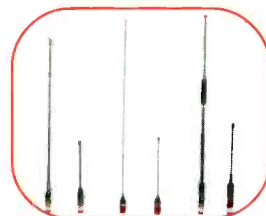
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# DX Bilong Papua New Guinea

## How To Dig These Stations Out Of The Noise

by Gerry Dexter

No matter where you might put your finger on a map, it's unlikely you'll touch a spot where radio is more important than in Papua New Guinea. These islands, located in the far Western Pacific, almost to the point of becoming intimate with Indonesia's gazillion islands, are both blessed and cursed with the most rugged terrain imaginable. One doesn't just take the family car out for a lazy Sunday afternoon jaunt to visit relatives in the next town. In fact, it wasn't that long ago when residents of next-door villages couldn't communicate, even if they were face to face. Over the centuries, each isolated area had developed its own language so neighboring communities couldn't understand each other. Eventually the number of languages spoken in Papua New Guinea passed the 700 mark!

That alone makes it easy to see why radio has played such a vital part in providing entertainment, education and even a sense of nationhood to Papua New Guinea, and has done so ever since the Australians put the first stations on the air after World War II. In fact, the Aussies ran the country for some 30 years after the war ended, until Papua New Guinea gained its independence in 1975. PNG still receives considerable aid from Canberra.

Like many government-supported broadcasters, recent years have meant that the National Broadcasting Commission has had to deal with burgeoning budget problems and has thus been faced with difficulty maintaining and upgrading equipment. There was a period — perhaps a decade back — when most of the stations were provided with higher power transmitters, new studio buildings, and the like. But, by a year or two ago, many of the short-wave outlets were either off the air due to equipment problems or were barely maintaining their schedule. Apparently the situ-

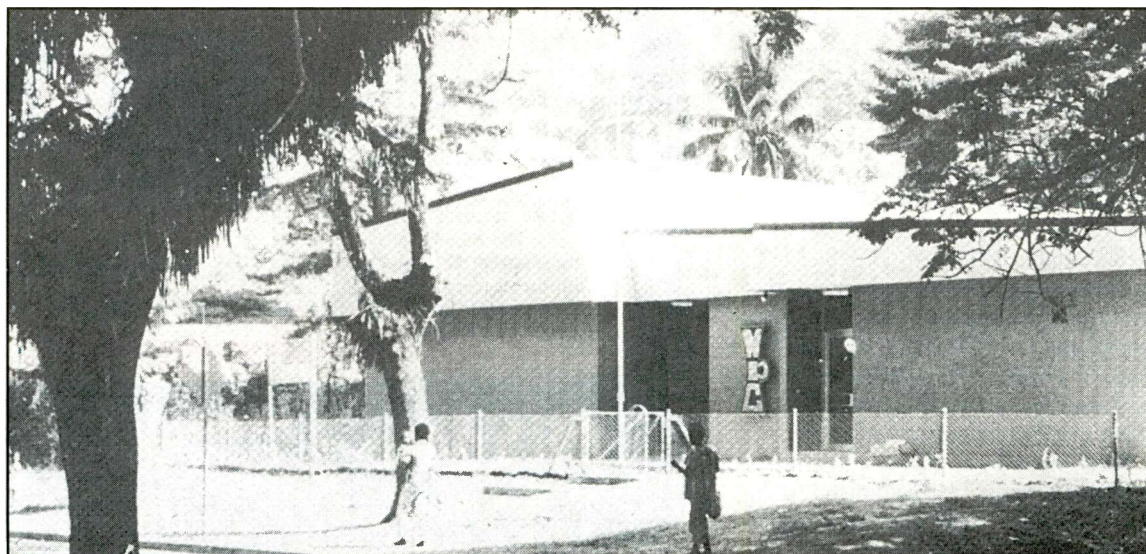


*Recording a commercial on the Kundu Service.*

ation has since eased somewhat, because most, if not all of the stations have been heard by DXers over the past few months.

### Braving The Noise Monsters And Static Of 90-Meters

For the DXer, Papua New Guinea presents a fascinating and challenging target. Just how challenging depends on where you



*The studio building of Radio East New Britain, Rabaul.*



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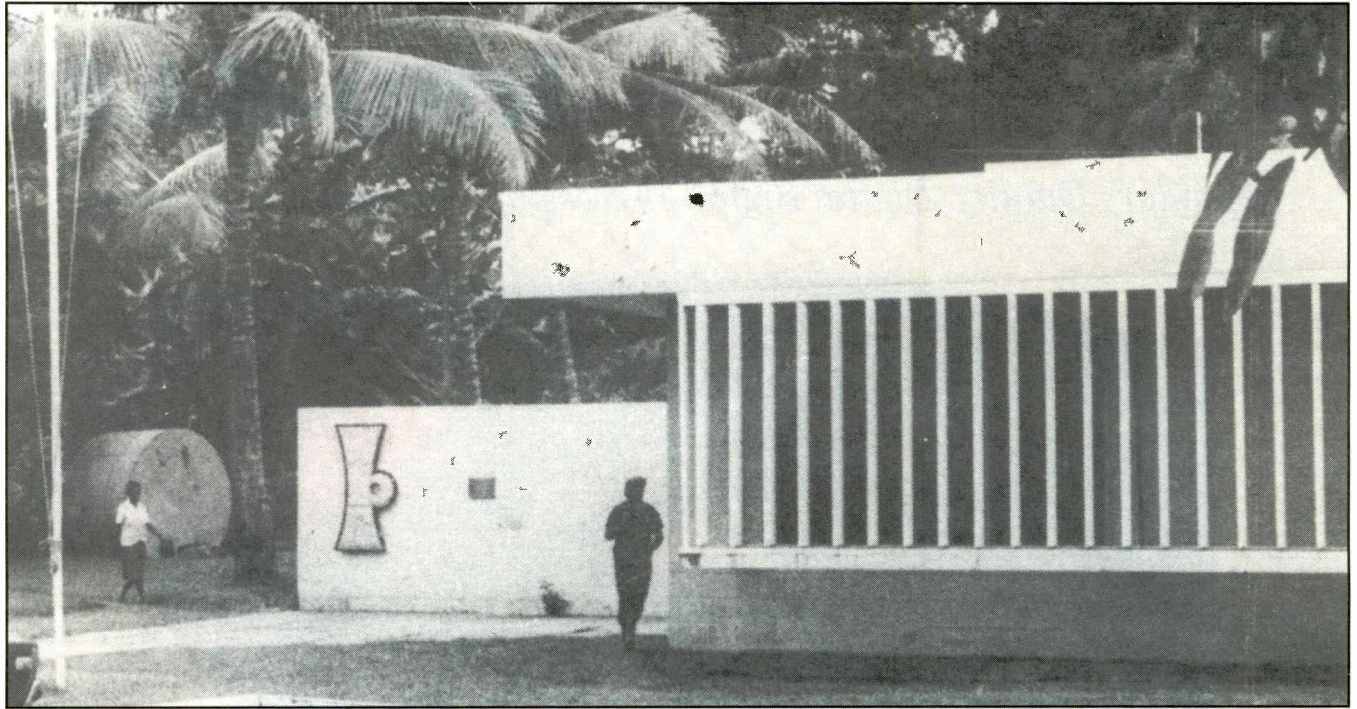
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*Radio Western broadcasts from this facility, at Daru, on 3905.*

live. Listeners in the northwest will find these signals in their headphones fairly often. But for the Easterners it's a lesson in humility; proof that the propagation gods do, indeed, have a mean streak.

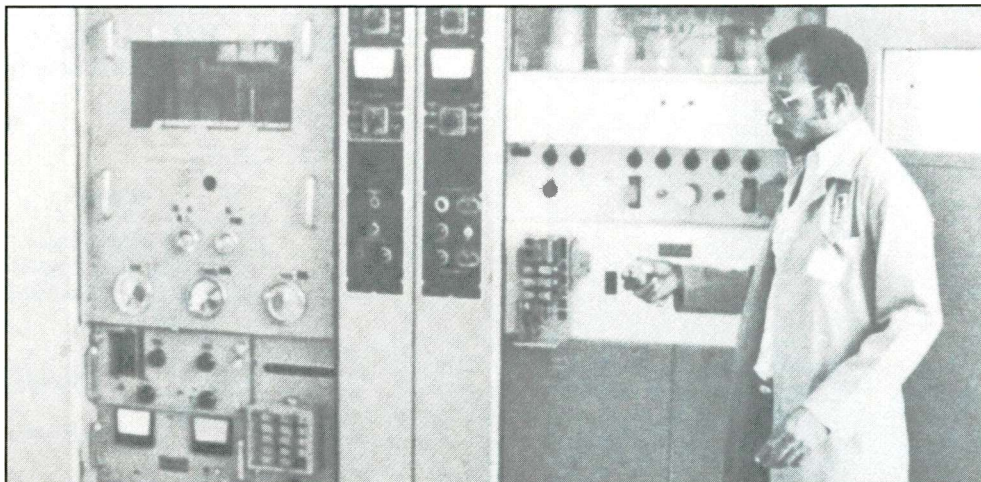
Rule one in logging these stations is that you have to brave the 90-meter (3 MHz) band — those nether regions still believed

by some to be a place where only static, interference, and man-eating monster noises live. Actually, DXers go there all the time and (most) actually come back alive and usually none the worse for wear! Another demand on your system is the need to make this journey in the early morning hours. You must beat the sun by 30 minutes to an hour, then run back and forth through a

Frequency	Station	Location	Radio Country
2410	National Broadcasting Commission	Port Moresby/Boroko	Papua
3205	National Broadcasting Commission	Port Moresby/Boroko	Papua
3220	Radio Bougainville	Buka	North Solomons
3235	Radio Central	Port Moresby/Boroko	Papua
3245	Radio Eastern Highlands	Goroka	New Guinea
3260	Radio East New Britain	Rabaul	New Britain
3275	Radio East Sepik	Wewak	New Guinea
3290	Radio Enga	Wabag	New Guinea
3305	Radio Gulf	Kerema	New Guinea
3315	Radio Madang	Madang	New Guinea
3325	Radio Manus	Lorengau	Admiralty Islands
3335	Radio Milne Bay	Alotau	New Guinea
3345	Radio Morobe	Lae	Papua
3355	Radio New Ireland	Kavieng	New Ireland
3365	Radio Northern	Popondetta	New Guinea
3375	Radio Sanduan	Vanimo	New Guinea
3385	Radio Simbu	Kundiawa	New Guinea
3395	Radio Southern Highlands	Mendi	Papua
3905	Radio Western	Daru	New Guinea
4890	Radio Western Highlands	Mt. Hagen	New Guinea
9675	Radio West New Britain	Kimbe	New Britain



*A shortwave transmitter used by a station carrying the Karai Service.*



course covering some 18 frequencies. If your receiver has the capability of storing frequencies plug them in. (in ascending order). And keep our station chart at the ready. You can dart (or scan) back and forth looking for signals a lot faster that way. Speed can be important, because the signals fade up quickly and, invariably, if one station is "in" others will be also be found.

Despite what some frequency lists show, the only active channel outside the tropical bands is **9675**, which runs to 0900 and is sometimes dug out by early birds (or night owls) when the wind is right. There are no active outlets in the 6- or 11-MHz bands.

There are three NBC program services: Radio Karai — the name for a local cockatoo, Radio Kalang (which means something of value) and Radio Kudu (a type of ceremonial drum). The Karai service features programs on development, education, and culture. The Kalang, not surprisingly, is a commercial service featuring sports, pop music, and advertising. The Kudu service focuses mostly on news and current affairs.

In addition to shortwave, NBC has an extensive network of local FM stations, which provide near nationwide coverage.

The programming is mostly in English and Pidgin English (also called Tok Pisin). In between talk segments you'll hear a lot of country/western stuff, which is very popular there. Most of the stations operate similar schedules, running to sign-off around 1200 UTC.

Reception, as we said, varies in quality depending upon where you live, but the season of the year is also a big factor (spring and fall are the best). Reception even varies from year to year, depending upon where we are in the sunspot cycle.

A few years ago, there was an independence movement on Bougainville Island and the sputtering, off-on conflict eventually put Radio Bougainville off the air. It was moved to Boca Island and reactivated in early 2000. A micro-power clandestine — **Radio Free Bougainville** — operated on the island for a time and, as of a few months ago, was reportedly still active using **3850**. To our knowledge,



*The studios of Radio North Solomons were destroyed during the Bougainville conflict. In more peaceful times, the station manager lived in the house at the extreme left.*

this was never heard in North America. Its teaspoon of watts emanated from a small generator, which, rumor had it, was powered by coconut oil!

NBC's future is something of a question mark. The government has talked about privatizing the service, which would mean cutting back or eliminating all government

Rave Review  
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April '96

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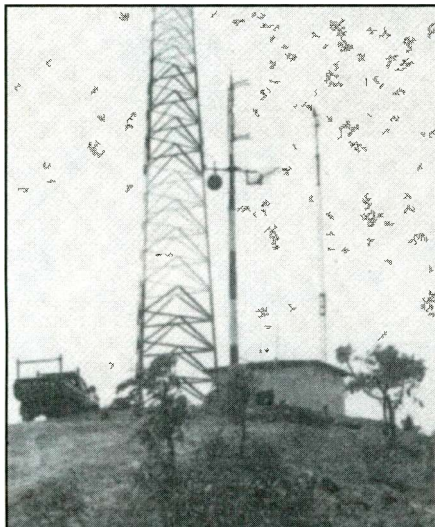
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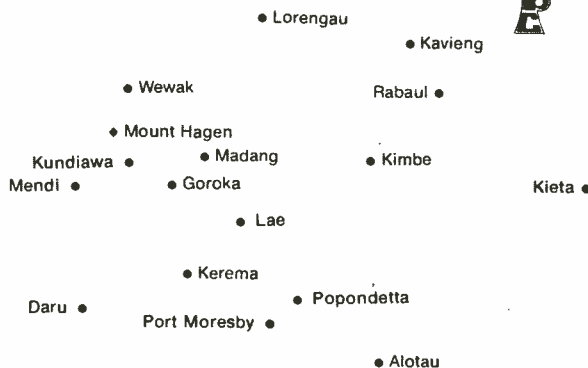




The NBC transmitting tower near Port Moresby.

## NATIONAL BROADCASTING COMMISSION

PAPUA NEW GUINEA



Locations are shown on the system-wide QSL used by NBC stations.

financial support. It's rather hard to imagine NBC and its extensive network of stations being able to stay afloat based only on advertising, and it seems reasonable to think that collecting license fees would be impractical. We can only wait and see what this will mean for the 20-some stations that

operate under the National Broadcasting Commission's banner.

A religious broadcaster has been granted approval to operate on shortwave from Papua New Guinea. Station KBBN (Krai Bilong Baibel), based in Mt. Hagen, is already active on the FM band but the shortwave plans have been put back due to financial problems.

hearing the stations. Sometimes there isn't the staff or the time to send replies to DX listeners. All the stations use a standard QSL card featuring a map showing the all the station locations. Write a friendly letter (this is one case where language is no problem) and enclose two or three International Reply Coupons (IRCs) or PNG mint stamps. Sending dollar bills is not recommended.

Now, all you need to do is make a copy of the frequency list we've provided, enter them in your receiver's memory bank and set your alarm for tomorrow morning! Good luck!

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### QSLing Papua New Guinea

QSLs? You can get them but the amount of effort will be approximately equal to the difficulty you probably had

### Papua New Guinea Station Addresses

- NBC, P.O. Box 13691, Boroko, NCD
- Radio Bougainville, P.O. Box 353, Buka, N. Solomons Province
- Radio Central, P.O. Box 13696, Boroko, NCD7
- Radio East New Britain, P.O. Box 3118, Goroka, Eastern Highlands Prov.
- Radio East Sepik, P.O. Box 39311, Rabaul, East New Britain Prov.
- Radio Eastern Highlands, P.O. Box 6515, Wewak, East Solomons Prov.
- Radio Enga, P.O. Box 30019, Wabag, Enga Province
- Radio Gulf, P.O. Box 3622, Kerema, Gulf Province
- Radio Madang, P.O. Box 213825, Madang, Madang Province
- Radio Manus, P.O. Box 50528, Lorengau, Manus Province
- Radio Milne Bay, P.O. Box 11131, Alotau, Milne Bay Province
- Radio Morobe, P.O. Box 126233, Lae, Morobe Province
- Radio New Ireland, P.O. Box 14036, Kavieng, New Ireland Province
- Radio Northern, P.O. Box 13739, Popondetta, Northern Prov.
- Radio Sanduan, P.O. Box 3742, Kundiawa, Chimbu Province
- Radio Southern Highlands, P.O. Box 10445, Mendi, So. Highlands Province
- Radio West New Britain, P.O. Box 2348, Daru, Western Province
- Radio Western, P.O. Box 31151, Mt. Hagen, W. Highlands Prov.
- Radio Western Highlands, P.O. Box 41254, Kimbe, W. New Britain Prov.



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## Magellan's MAP 330 GPS Receiver

Getting lost in my own city comes easy for me. If I choose left at the stop sign, sure as the sun rises in the East, I should have turned right. It probably has something to do with too much radio energy over the years, but what the heck. I go far enough and I'm bound to recognize something, right? Besides, folks sometimes tell me where to go, anyway. Thankfully, recent advancements in technology and lower prices have put state-of-the-art direction finding in the palm of your hand.

I can't say enough about these little Global Positioning devices. Every home should have one, whether you're into camping, hiking, biking, or just vacationing or taking one of those hip one-day excursions within a couple hours of home. The MAP 330 GPS unit is compact (it's as small as a cell phone and smaller than most cordless phones) measuring about 6 1/4" x 2 1/8" x 1 1/4". My small office stapler is about the same size and weight. This GPS unit is so compact it fits in my coat pocket. A few years ago I would have needed a backpack to carry a receiver with this many neat features. Let's take a look.

Thales Navigation, formerly Magellan Corporation, headquartered in California, is a broad-based satellite access technology company. They've definitely got a handle on what we want in a GPS unit.

It took me only a few minutes to learn the ins and outs of the MAP 330, which offers 16 MB of built-in memory, a detailed database of street maps, U.S. cities, highways, major roads, national parks, waterways, and railways. The MAP 330 news release says, "... its 12-parallel channels and sensitive quadrifilar antenna enable GPS satellite lock-on in harsh environments and fast position fixes with up to 10-meter accuracy." Simply, it's a darned good receiver that'll work in the woods and downtown, giving you positioning accuracy your parents only dreamed about.

Of the unit's 16 MB of memory, 8 megabytes are available for downloading detailed street maps, waypoints and routes from their new MapSend Streets™ CD-

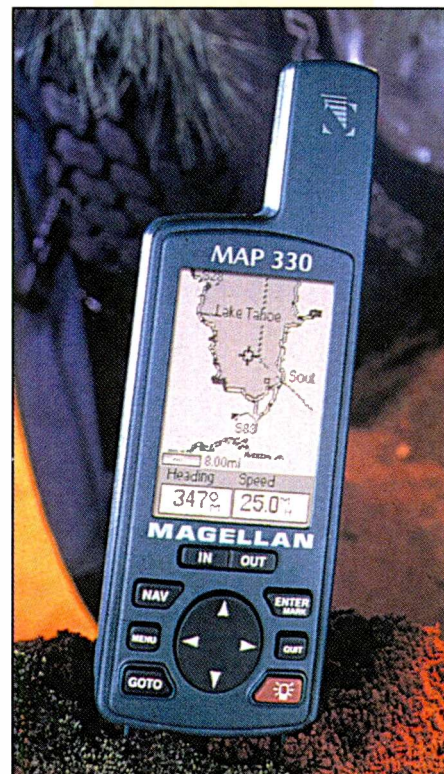
ROM, sold separately by Thales. MapSend Streets provides detailed street maps of the entire United States! You can't get lost. Let's put it this way: if you do, you've left the MAP 330 at home. I used the MAP 330 all summer on my 10-speed (with the optional bike mount that grips the 330 firmly while you enjoy the ride) and found the high-resolution backlit display extremely easy to read and follow. As you bike around, the display changes as the icon indicating your position moves with your movement. Turn east down Main Street and stop 10 feet after turning, and the icon turns with you indicating your different direction of travel.

Navigating the unit's menu system is a snap. Believe me, this isn't a complicated "bring the manual with you" when you travel GPS unit. Thales includes a small quick start card, which I always carry when out with the 330, just in case I forget a specific keypress. But overall, the menu is very user-friendly, even for first-time GPS users.

There are four customizable graphic navigation screens that direct you to your destination while simultaneously showing bearing, heading, distance, speed, remaining time to destination, cross-track error, and much more. I found it particularly useful for designating waypoints, which remain in the 330's memory until you decide to delete them. These waypoints and routes make it a cinch to get on the bike or in the car and go from here to there. At any point along the way you can also, by a couple simple keypresses, designate additional waypoints. It's great for hiking because you can also easily customize your travels with notes for each landmark so retracing your route is as easy as turning the unit on and pushing a button.

### Power Up

The MAP 330 uses only two "AA" alkaline batteries. The battery compartment on the rear of the unit is one of the best-designed compartments I've seen in a long while. Lifting up a small ring in the center of the rubberized back cover,



*The MAP 330 GPS receiver carries a suggested retail price of \$269 and is typically available from your favorite radio dealer where you buy scanners, CBs, and ham gear.*

and unscrewing the post gives you access to the batteries. Then, lift off the back cover. You won't get broken nails, fingers, or have to pry the cover off with a coin or screwdriver. No brute force required! Best of all, it's a super snug fit on the unit, keeping water out of the compartment and unit's electronics.

I used the receiver on and off for several weekends before needing to replace the batteries. The user's manual says you can expect 10 hours of usage before having to replace the batteries. I'd say that's about right, depending on your use of the 330's backlight, which eats batteries if left on continuously (but is darned useful at times!).

The MAP 330 has five navigation screens: Map, Compass, Large Data, Position, and Sat Status. For the most part





Here's the MAP 330 GPS mounted on my 10-speed using the optional bike mount.

I used the Map Screen (which has two modes, position, and cursor). In the position mode there's a large arrow icon that shows your present position; turn down another road and it points in that direction. Use another button on the MAP 330 to zoom in or out getting a better picture of your direction of travel. You'll also see a small dotted line — a trail showing where you've traveled. Very exciting and supremely useful! This is a really easy GPS unit to use, especially because I didn't have to keep referring back to the manual. Besides, they've provided a small shirt-pocket sized quick reference card.

In the Cursor Mode, pressing the keypad arrow button moves the cursor to any point, relative to your current position. A crosshair appears that you move with the arrow keypad.

For campers and hikers, the Compass screen (which is completely customizable!) shows your heading in a graphical manner, but also shows the position of the sun and moon, relative to your heading.

## Highly Visible Data

The Large Data screen is really slick. The compass graphic disappears, and you're presented with four fields of data: Bearing, Heading, Speed, and Distance. Even with my reading glasses off, and at dusk, the numbers were large enough to be seen without activating the display light. I used this screen as much — perhaps more — than the basic navigation Map screen. On a recent Amtrak train trip I constantly checked on the train's speed — oops, it crept up there a few times! The "Distance" field allows you to key in a pre-determined destination, so you're

---

*"The Large Data screen is really slick. The compass graphic disappears, and you're presented with four fields of data: Bearing, Heading, Speed, and Distance."*

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always aware of just how far you are away from Grandma's house as you travel the interstates.

Waypoints can be customized and saved for eternity in the MAP 330. I've got our home location saved as Waypoint No. 1 and a small house icon appears on the screen at the precise location. Waypoints can also be named with a few simple intuitive keypresses, if you wish. How many waypoints can you store in the MAP 330? More than you'll ever need: 500, to be exact.

## MAP 330's Bottom Line

What a great user's manual! I don't know anyone who could say it better than Thales has in the manual. A Go-To Route "is simply a route with a start point and a single destination point; I am here and I want to go there."

You're going biking, starting from the camp by the lake. Turn on the 330, and with a couple keypresses mark your location into the unit's memory before leaving. Save it as a waypoint in the "User" database, calling it "camp." Go biking all day and then use the MAP 330 to find your way back to the camp in time for the barbecue. The MAP 330 has a huge database of cities, highways, airports, national parks, and waterways you can select, or create your own and save it to memory.

Of course it all depends on the satellites high above you. The Satellite Status screen shows it all: even providing a satellite position icon, satellite signal strength bars, and battery status indicator on one screen. I found the receiver to be very sensitive and was even able to access two or three satellites when sitting near a window in our wood-frame house. Outside, numerous satellite status bars popped up regardless of terrain or environment. The higher the bar, the stronger the received signal used to compute your location.

I mentioned earlier that the unit eats batteries if you use the display light continuously. That's nothing new to us radio users. Use your handheld scanner with the volume cranked up or the display light on and you'll get the same results. I used the MAP 330 for five continuous hours, repeatedly turning the display light on and off, and the battery indicator showed it was about 50 percent depleted. The manual says you'll get about 10 hours of use from a new set of alkaline batteries. Frankly, it's always a good idea to carry a pair of fresh batteries just in case.

A complete line of accessories for the MAP 330 is available, including a swivel mounting bracket, vehicle mounting bracket, nylon or leather carrying case, PC interface cable with cigarette lighter adapter, external cigarette lighter power cable, PC cable, MapSend™ Streets CD-ROM (which contains an extensive database of more detailed street maps you can upload to the MAP 330) and much more.

For more information on the compact MAP 330, contact Thales Navigation at 960 Overland Court, San Dimas, CA 91773 or phone 909-394-5000. Please tell them you read about their MAP 330 in *Popular Communications* magazine, and thanks to the MAP 330, Harold isn't out there lost in the woods, scaring wild animals. ■



# The Little Panel That Could

**The SunWatt System Is Safe, Convenient, And Keeps You Powered!**

by Jeff Mack

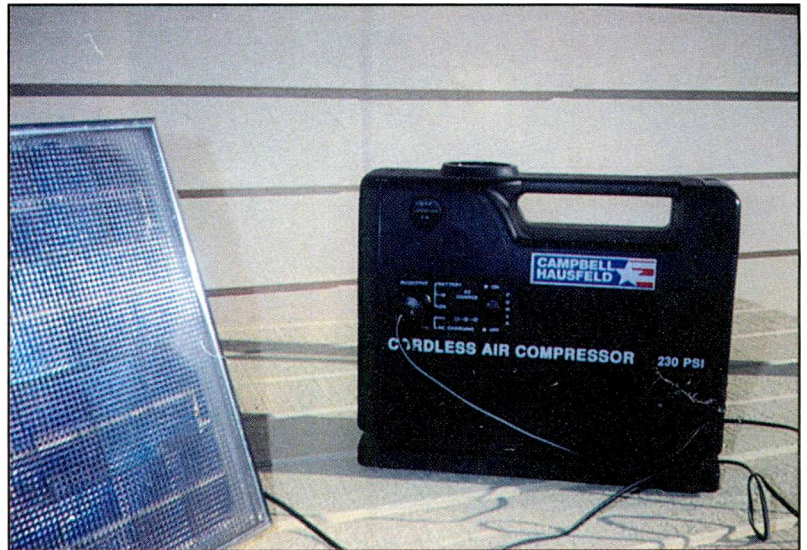
What are the two of the most important things we need in order to have a normal life on a daily basis? It's lights and communications. Sure, we need food and warmth and other amenities that give us the creature comforts we've all grown accustomed to, and of course, a kerosene heater can help in a pinch when the power goes out. Most propane and gas stoves are still usable without "juice," minus the oven. But what really matters is our comfort zone — what makes us secure and gives us a sense of independence, no matter how measurably small it may be.

We all need to stay in touch with the world, whether we're ham operators, CBers, or occasionally listen to the scanner or shortwave radio to get information we don't always get on the evening news. It's also pretty obvious that light, no matter how little, can be a real plus when the chips are down. I'm going to discuss a product that I've field-tested. It works, with or without batteries or fuel, and most of all, it's convenient and completely safe for anyone to use. It's the F-12J; a 10" x 13" solar panel that produces 10 watts at .6 amps that can charge rechargeable lanterns, directly power a shortwave radio, charge a gel cell battery — which can, in turn, power an AC inverter for TV or lights. Convenient battery holders on the back of the solar panel hold eight "AA," "C," and "D" cell batteries, and two nine-volt connectors, plus a power cord. At only \$160, it's economical and gives you portability in a small package!

## How It Works

In the photo you'll see it charging a Campbell-Hausfeld air compressor with a sealed battery. It has a DC input/output connection to operate a radio, a five-inch black-and-white TV, enough power to run my six-volt DX-390 shortwave receiver for 14 hours and much more. I also charge a seven-amp sealed gel cell battery I use for my ADI AT-600 dual-band handheld. You can safely charge large deep cycle batteries, though it will take a few days if the battery is low on charge, but it won't overcharge it either. Its built-in voltage regulator and blocking diode keeps the power from draining back at night. You never have to buy a charge controller to connect between your battery and panel, so you're saving an added expense. It stores in a closet or a backpack, so in minutes, you're ready to go!

I've used it to power my TRC-234 CB that requires 13.8 external volts. No problem because the positive pin adapter connects directly to its side for instant field communications. Even on a cloudy day I found very



*The SunWatt system connected to a cordless air compressor.*

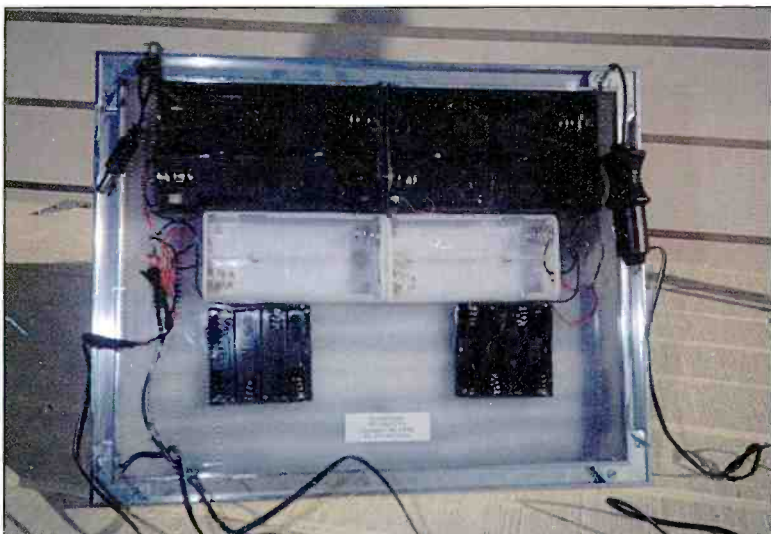
little voltage loss. The power output cord produces 14.4 volts typically, which is sufficient to run anything portable, within reason, of course.

I charged a nine-volt NiCd with four "AA" batteries at the same time in one afternoon. Try doing that with any other solar charger — good luck! You can also mix and match; each battery has its own bay. You have to load four batteries to make a complete circuit in order to charge batteries, except the nine-



*Charging a 5348 Coleman lantern with the SunWatt system.*





A look at the back of the panel and battery compartments.

## Check The Pin Adapter!

Always check to make sure you're using the correct pin adapter for your equipment. The power cord is a positive pin connection; some shortwave and ham handhelds are negative. Don't mix the two. If you power the radio directly from the panel itself, you can change the polarity by simply getting another pin adapter, stripping both wires and connecting backwards to the alligator clips, creating a negative polarity. It's safe to use in the field, and you won't damage your equipment when you need it the most. Just check the side of the DC appliance where you'll see a pictograph of a negative minus sign, a small dot with a half-circle, then a positive plus sign; since the half-circle faces the positive symbol, it's a positive pin connection appliance. The reverse, with the half-circle facing the negative sign, means it's a negative pin connection.

## For More Information

volt battery. (I converted one of the nine-volt connections with a male cigarette lighter plug, then added a female connection with 1 3/8" alligator clips at the end to power my gel cells, which also allows me to directly insert the cigarette adapter into the Campbell-Hausfeld for charging purposes.)

Each day I can easily charge two lanterns — five hours each. My 5348 Coleman rechargeable lantern is outside at 9 a.m., and replaced at 2 p.m. to receive the afternoon sunlight. They give me six hours of light on two tubes; nine hours on one.

These panels are individually made by Richard Komp of SunWatt Corporation, a small company located at RR2, Box 7751, Jonesport, Maine 04649, phone 207-497-2204. You can also E-mail the company at sunwatt@juno.com.

Mr. Komp sells a variety of panels with sizes that fit your needs and budget. The one in the photos is the panel I happen to enjoy — that's why I own two of them!

He runs his facility completely off grid power, using inverters. Please tell Mr. Komp you read about the SunWatt system in *Popular Communications*.

# HEAR THE WEAK ONES

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## E-Filing For A Portable Marine Station License

The Federal Communications Commission no longer requires a boater to hold a marine station license. No station or individual license is required for boating in local U.S. waters, only having marine VHF onboard, along with a simple marine radar and an emergency position indicating radio beacon (EPIRB). Use your boat name as your on-the-air identifier.

However, if you plan to go boating or sailing up in Canada, or down in the Caribbean or Mexican waters, the FCC rules will require your marine radio station to be specifically licensed. This even includes a small VHF handheld that you might be bringing into Canada or Mexico that would be used portable aboard a pal's boat. Without a valid marine license to go along with the equipment in a foreign country, that country might very well confiscate your radio.

FCC rules also require a ship station license if your boat has marine single sideband onboard, or your boat has satellite INMARSAT equipment installed or carried aboard. Marine station licenses consist of 3 letters and 4 numbers, and are good for 10 years. The fee is \$120 and up. *(Ed. Note: There was a fee increase this past fall, and no doubt the marine radio service will be affected.)*

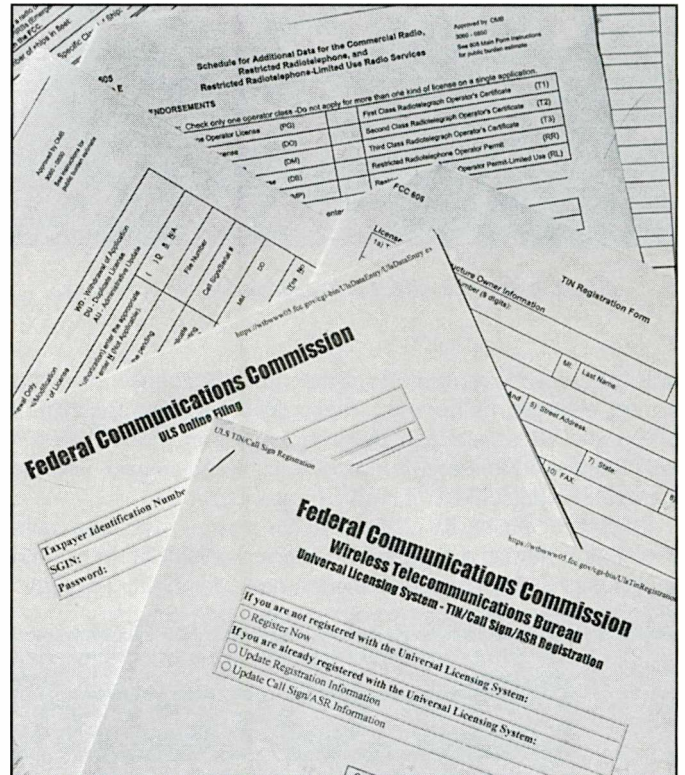
Obtaining a marine station license for your VHF marine portable radio would allow you to take this equipment aboard ANY boat, and with the captain's approval. Transmit over marine channels using your own FCC callsign. It would allow you to legally take a portable marine VHF set into Canada, the Bahamas, or Mexico, and use that equipment on the air to talk to other fishermen, sailors, or cruisers. The portable license allows unrestricted marine radio use aboard any boat of your choice — from a canoe to your friend's big cabin cruiser or sloop, your own radio with your own callsign is allowed.

### Don't Use Form 506

The marine station license was originally completed on a blue FCC Form 506. **DON'T USE THIS FORM!** Even though the brand new radio had that form inside the box, it is no longer valid and the Commission may keep your money and dismiss your application.

The best way to file for a marine station license, plus a restricted operator's permit if you have never received one of these lifetime licenses is to file electronically at [www.fcc.gov](http://www.fcc.gov).

This gets you to the FCC HOME PAGE and you will get to know this page well because you will be going back to it several times as you work through the registration exercise. If someone told you that working up an FCC license application on the computer is a nightmare, they are right! As you read my instructions, the FCC is merging CORES and ULS — Universal Licensing System. If you register with both, using the same password and password reminder, you will end up with a CORES number ending with 000, a Federal registration number, and a ULS number, beginning with the letter "L." If this is



There are plenty of forms to fill out on the computer, but the process is straight forward (says the FCC!).

the first time you have applied for a radio license within the last five years, the FCC database will bring you on as a new applicant. It takes down your Social Security number as a taxpayer identification number (TIN) as part of the process. There is no way around that. However, if you are a ham radio operator, and have had your paperwork processed by a volunteer exam coordinator (VEC), there's a good chance you are already on the CORES and ULS system. The problem here is that you don't know your password to get beyond these initial applications and into the on-line Form 605 that ultimately leads to your portable ship station license callsign.

### What To Do If You're In The System

If you THINK that you are in the system, you may contact the CORES administrator and give them your name and Social Security number, and they might very well give you your assigned Federal registration number. They're at 877-480-3201. You next need to find out if an earlier FCC license application put you into the Universal Licensing System. You will need to make another phone call to 202-414-1250. An online way of





*Obtain a portable marine VHF license to use a VHF radio on any boat.*

finding out if you might have already been registered under one or both of these systems (soon to combine) is to simply begin the CORES process, then the ULS process, using the same password and same reminder of that password, and see what happens. If you end up with “accepted,” you are ready to begin filling out Form 605.

However, if your CORES and/or ULS registration locks up with the word “duplicate,” or “duplicate, denied,” then you need to make the phone calls and endure a few days of waiting for snail mail to come with a new temporary password that you go in and change to your own selected password. I can see your eyes rolling right now! But stand by — once you get through the registration process, it could become smooth sailing for your ship station license.

Back to the home page, and now on to ULS licensing, specifically Form 605. You may be filling out this form twice. One time will be for your ship station license, and the second time will be for your restricted operator’s permit, a lifetime permit,

costing about \$50. When E-filing Form 605, the radio service code for marine is “SA.” For your restricted operator’s permit, the radio service code is “RR.” On schedule B of the 605, you will check Item 1 as “P” for portable. Skip questions 2, 4, and 5. Questions 6 and 7 are “NO.” Be sure to check “YES” at item 9. You will receive a 9-digit maritime mobile service identity number, and this will be of big use to you when you get one of the newer marine VHF radios with digital selective calling (DSC).

If you are applying for the restricted operator permit, E-file on Schedule E of Form 605, but *don’t* put a check mark beside “marine radio operator permit.” This is NOT the one you are going for without a test — you want “RL,” restricted permit.

Now you are on to the FCC Form 1070Y, and this will tell you the amount you need to pay for your “PASR” ship station registration, and your “PARR” restricted operator permit. On FCC Form 159, you type in your MasterCard or VISA

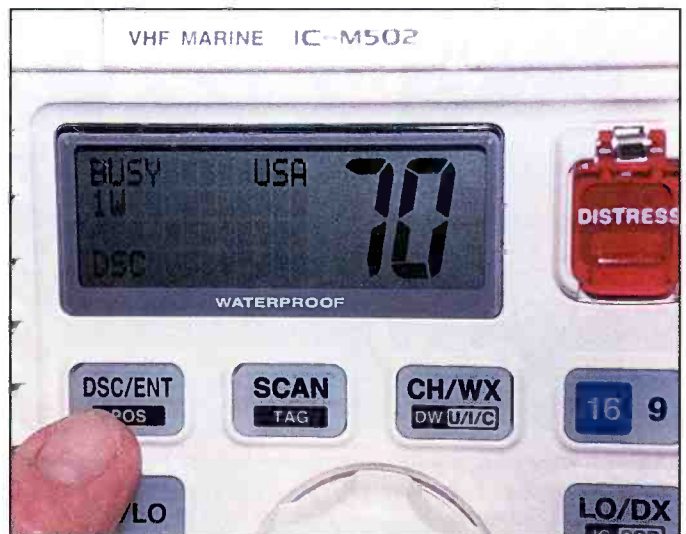
numbers at this government secure site, and electronically your package goes out. Within a week you should receive your FCC callsign in the mail, along with the restricted operator’s permit.

This same process applies to the GMRS licensing, business radio licensing, and changes you wish to make electronically on your ham radio license.

The Federal Communications Commission is hoping the radio licensing process may eventually go completely paperless. Our phone calls to CORES, ULS, and the FCC general help line at 888-CALL-FCC, (225-5322) were all positive and I got immediate responses to specific questions I asked. I experienced no long delays in getting through to a live person, and these articulate and extremely polite men and women did an excellent job in supporting the Commission during the changeover process of CORES, ULS, TIN, paper or e-file. Some even provided some subtle, positive humor encouraging us to try again on the computer. ■



*VHF radios with digital selective calling should be FCC licensed with a M.M.S.I. number assigned.*





### Your Dad's Chevrolet

#### MK484 Update

All orders received as of October 20<sup>th</sup> have been shipped.

Early last year a coworker appeared with an odd package — a rusted hulk that turned out to be a Delco AM radio removed from a 1950 Chevrolet that was undergoing restoration. My interests at that time did not extend to vintage automotive radios, which I envisioned as being rather featureless and uninteresting from a collecting or restoration standpoint. My coworker further offered that his friend could afford to up to \$100 to have the set gone through and put into working order. I calculated that just the restoration materials (caps,

tubes, resistors, vibrator, etc.) could quickly surpass his allocated budget.

As a kid I would often salvage a six or 12-volt car radio from the nearest junker, bypass the vibrator, and run it on a transformer capable of supplying the needed voltage and amperage. Despite the lower frequency 60 cycles vs. the 115 cycles produced by the vibrator, these radios seemed oblivious to the abuses we subjected them to. This particular radio was a bit earlier than the ones I had played around with, and also was unusual in that the speaker was integrated into the radio housing; instead of a remote location under the dash or rear seat deck.

#### Taking On A Challenge

After some deliberation, I called my coworker and offered to do the job, if only for some interesting column fodder (here it is!) and as a learning experience. After all, this radio is almost as old as I am! Most restorers shy away from car radios for a variety of reasons: the lack of spare parts and documentation, and the need for some specialized equipment. Also, car radios are tightly packaged, and can be a pain to work on. A DC bench supply capable of handling the voltage and currents requirements is a must. Occasionally, Heathkit battery eliminators are available on eBay or other on-line auction sites; look for battery eliminators when doing a search. The ultimate in power supply regulation or filtering is not needed here. A supply that offers some adjustment range, say from four to seven volts for six-volt sets, and from nine to 14 volts for 12-volt sets, can be handy in diagnosing some problems. More on this later. Another possibility is surplus switching power supplies. I've seen a lot of high current five and 12-volt *switchers* available for cheap prices, and many *switchers* have internal pots that permit output voltage to be varied over a small range. Many five-volt units might make it to six volts with just a simple adjustment. You'll want a supply that can handle at least 10 amps at six volts, and one that will do at least six or seven amps for 12-volt sets. More would be better. The supply should be able to handle the initial turn surge current that will be drawn by the cold filaments.

#### What's Inside?

We're only going to deal with early vibrator power supply car radios. By the late 1950s car radios were undergoing a revolution. The tube industry, in a last ditch effort for survival, had developed a line of specialized tubes that would operate with 12-volt plate potentials. Hybrid models began appearing which used a germanium power transistor for the audio output stage while the rest of the radio used tube technology. I've had limited exposure to those sets, and so I won't cover them in detail at this time.

A typical 1950s car radio was AM only, and used from five to eight tubes. They used a tuned RF amplifier in the front end, which was typically a 6BA6 or 12BA6 depending on if the radio was six or 12 volts. The RF stage was needed for several rea-

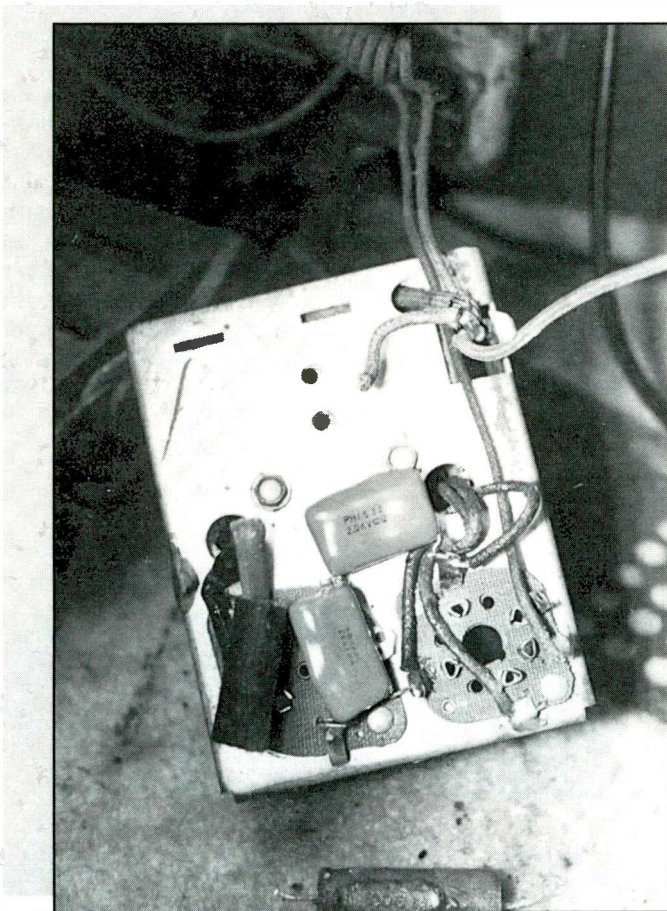
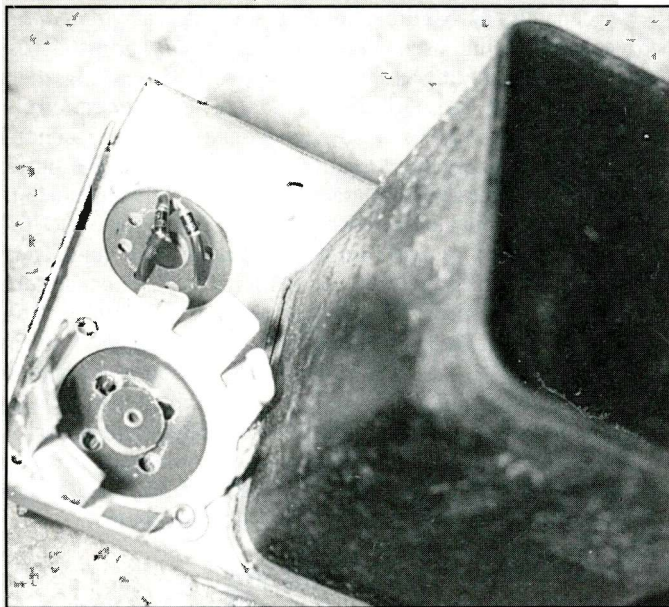


Photo 1. Here is the power supply section removed from the 1950 Delco receiver. The bottom shield plate has been removed. The wax buffer cap has been removed and replaced with two Mylar caps in series — this was done to achieve the desired capacitance and voltage rating using parts I had on hand.





*Photo 2. The upper portion of the power supply deck. The large black object at the right is the potted power transformer. The OZ4 socket is seen at the upper left — note the two NTE fast recovery diodes used to replace the OZ4. The vibrator socket (4 pin) is at the lower left. Note the prongs that provide both mechanical and electrical bonding.*

sons. First, car radios were expected to work in extreme conditions and in weak signal areas. The size of the AM antenna was limited. The short AM whip required a very special high-impedance coax (shortest possible length) between the antenna and radio. The antenna connects directly to the high impedance side of the tuned input stage, and using regular 50 or 75 coax will severely detune the radio, resulting in very poor sensitivity. This arrangement was practically a tuned active antenna arrangement by today's standards.

The filaments operated directly from the car battery. In a typical early 1950s set a 6BE6 was commonly used as the mixer, and 6BA6s were used in the IF stages. Car radios used one or two IF stages at 262 kHz. A 6AT6 or 6AV6 served as the detector and first audio. While most sets used a single-ended audio output stage, higher end sets used two in push-pull for more audio. 6V6s were commonly used here. Push-pull audio stages required an additional tube (12BF6 or similar triode) as a phase inverter to drive the audio stages 180 degrees out of phase for push-pull operation.

## The Power Supply

Except for the RF stage, so far the typical car radio lineup looks very similar to early tabletop AC/DC sets. But there are more differences. First, let's continue by looking at the power supply section. The power supply needs to convert the DC battery voltage to a high DC potential for the tubes to operate. There are several ways to do this, from dynamotors (a motor/generator sharing a common armature) to the more practical vibrator supply typical of most AM car radio power supplies. A vibrator is nothing more than a fancy doorbell buzzer with an extra set of contacts on both ends of the armature's travel. Many early farm sets used vibrator supplies, so even if your collecting inter-

ests are far removed from car radio restoration, a good understanding of how vibrator supplies work can be handy.

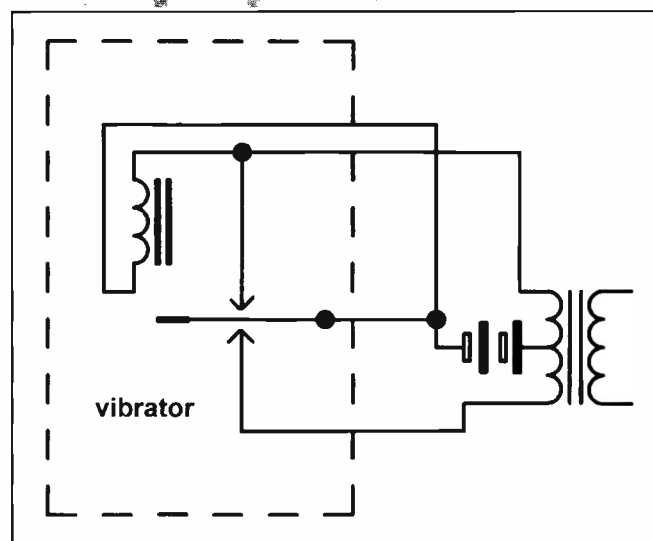
We'll use **Figure 1** to illustrate how the vibrator works. Since the car radio operates from a six or 12-volt car battery, we need a method to provide the high voltages needed by the vacuum tubes. Instead of using AC on the transformer primary windings, the vibrator alternately reverses the DC voltage across the primary, which in turn generates a continually changing (building, collapsing, and then reversing) magnetic field that induces the voltage across the secondary winding of the transformer winding.

Here's what happens. When power is first applied, current is allowed to flow through the vibrator coil, which attracts the armature, or reed, upwards towards the top set of contacts. When contact is made, DC is allowed to flow through one half of the transformer primary. At the same time, the vibrator coil is shorted, and loses its magnetism. The reed is no longer drawn towards it. Instead, inertia carries the reed through the end of its upward arc, and like a pendulum it then continues to swing in the other direction towards the opposite set of contacts, breaking the current flow through the primary winding. The reed then reaches and energizes the lower set of contacts, allowing DC current to flow through the lower primary winding. Note that the DC polarity, or phasing, is reversed at this point, causing a reversal of the magnetic field's polarity.

The vibrator coil is again energized, which draws the reed back towards the upper set of contacts where the cycle is repeated again and again. The end result is a square-wave voltage across the primary transformer winding which performs the same task as a pure sine wave AC power source. The actual frequency is determined by the mechanical characteristics of the reed, which is made of a thin section of clock-spring-like material. Most car vibrators operate at about 115 cycles.

## Real Life Application

**Figure 2** is typical of most car radio vibrator power supplies. But, a few parts have been added, and they are very important to the operation and service life of the vibrator. Whenever the



*Figure 1: Use this schematic and the accompanying text to better understand how the vibrator supply operates.*



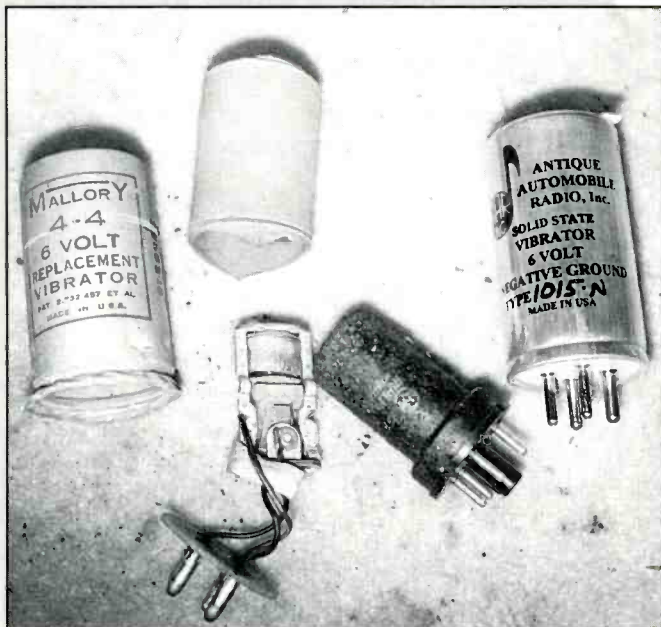


Photo 3. At the left is the opened, defective Mallory vibrator. The foam rubber shock absorber and noise suppressor is to the right of the opened can. The vibrator coil, reed, and contact assembly can be seen just below the foam shock absorber. The rusted metal tube is the OZ4 gas rectifier. The solid-state replacement vibrator is at the far right.

voltage is removed from the primary winding, the transformer generates a very high counter EMF (back voltage) due to the high impedance of the unloaded primary and the energy released by the collapsing magnetic field. This can cause excessive arcing across the vibrator contacts, shortening the useable life of the vibrator. To lessen arcing, two 220-ohm resistors are added, one each across each half of the primary — these resistors absorb most of this energy. You may also find capacitors were used instead of resistors for this task.

The capacitor across the secondary winding is a *buffer capacitor*. It can be found used across the full primary, or just across one half of the winding as shown in **Figure 2**. This arrangement was shown in an early GE tube manual. The buffer cap limits the high voltage spikes occurring whenever a reed contact opens, thus reducing sparking at the reed contacts. The buffer capacitor combines with the secondary winding inductance to provide a smoothing action. Typical buffer capacitor values fall between .005 and up to .03 mFd. These are high-voltage caps. and must be replaced with equal or higher voltage capacitors. If the buffer cap opens, the vibrator contacts will spark excessively, and this will lead to premature vibrator failure. If it shorts or becomes leaky, the current limits for the vibrator contacts will be exceeded, and early failure will again result. *Always* replace the buffer cap with a high quality Mylar capacitor! In **Photo 1**, two high-quality Mylar capacitors are used in series to replace the buffer capacitor in the Delco radio. The old wax paper buffer cap is shown at the bottom of the photo.

## Noise Filtering

The vibrator supply, with its sparking contacts and induced high-voltage transients, makes a fine spark-gap transmitter, and can effectively wipe out nearby radio communications across a wide frequency spectrum if precautions aren't taken! Car radio manufacturers took great pains to filter, shield, and bypass these radios so this wouldn't happen. First, the vibrator is enclosed in a rugged metal housing; this protects the vibrator from the elements and also provides electromagnetic shielding. The vibrator socket has metal contact fingers to securely hold the vibrator in place, and to provide a ground path. See **Photo 2**. In **Photo 3** you can view the internal workings of the original Mallory vibrator. Note the reed and contacts, which are visible below the coil assembly. A foam rubber jacket surrounds the mechanism to isolate it from shock, and to help muffle the mechanical hum of the vibrator from being heard in the passenger compartment.

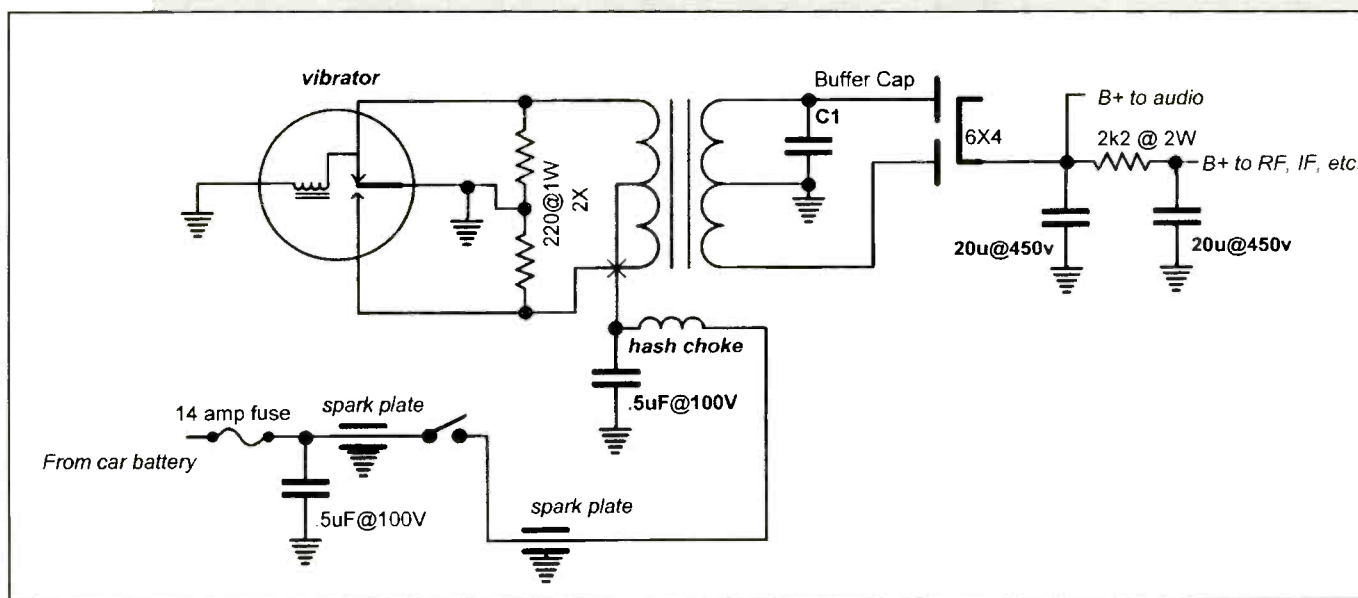


Figure 2: This power supply schematic is representative of what you will find used in car radios dating from the late '40s and into the '50s.



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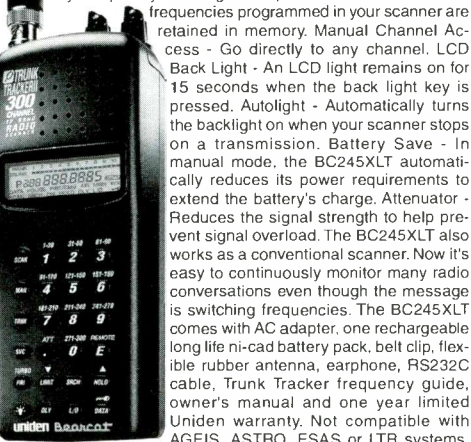
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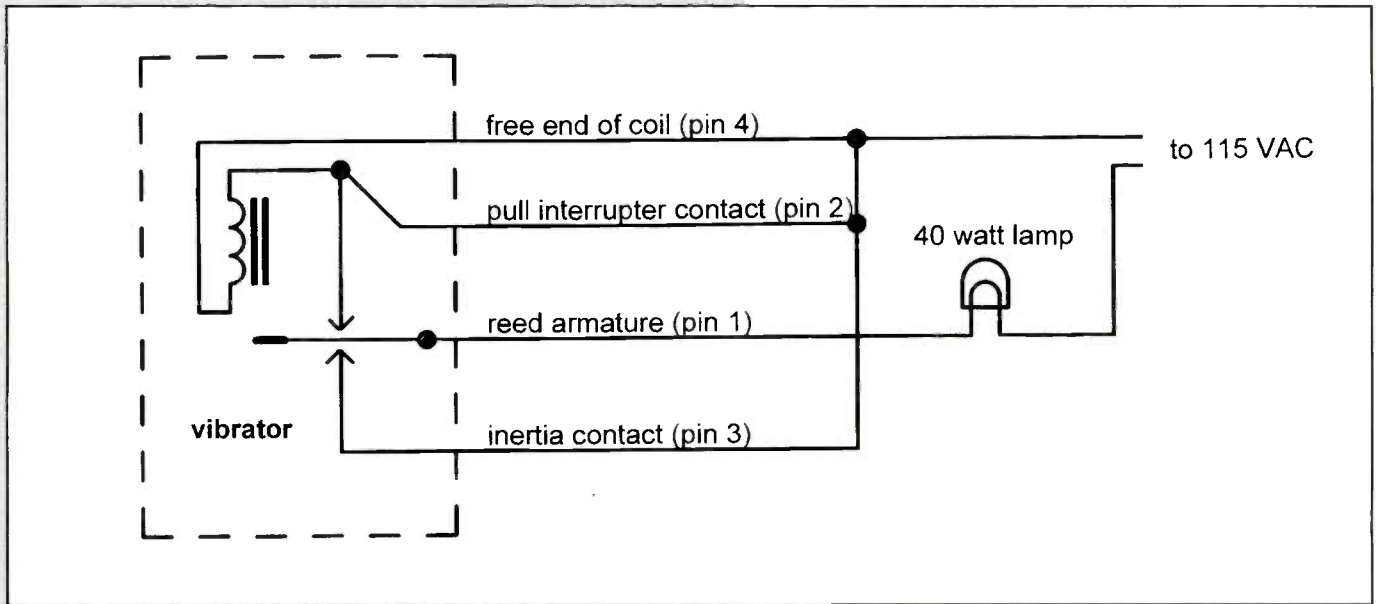


Figure 3: Use this simple lashing up to burn away contact oxidation on those vibrators that refuse to start. High voltages are exposed, so please be very careful when performing this task!

The vibrator *hash choke* and the .5 mFd capacitors provide further filtering so RF noise won't reach the radio antenna, or be carried on the tube filaments supply line. The photos show how this power supply was built on a separate chassis assembly inside of the receiver. A metal shield is used over the buffer caps and sockets to further reduce noise radiation. (This plate was removed during restoration work and for taking photos of work in progress). The vibrator hash choke is located inside of the black *spaghetti* insulated tubing above the vibrator socket. Note the second hash filter formed by the coiled wire trailing away at the top of the photo. A *Spark plate* filter cap is located at the junction point where several wires meet at the upper right of the power supply chassis.

### Spark Plate Capacitors

Starter motors, starter solenoids, and generators can generate high-voltage spikes that can damage the radio. These spark plate caps are comprised of a metal plate sandwiched between the chassis and another metal ground plate, using a thin cardboard as insulation and dielectric. The cardboard dielectric provides a low breakdown voltage and allows voltage spikes to arc to the ground.

After 50 years of exposure to the elements, it pays to carefully disassemble these caps, and check the insulation for deterioration. These caps are simple and make from a metal plate sandwiched between another plate (ground) and the chassis (ground again), and use a thin piece of cardboard stock for the insulator and dielectric. They are typically held together with a screw and bend-down metal tabs. I also make sure the cardboard is dry. If crumbling, the material can be replaced with thin sheet Mylar plastic, or a heavy card stock; or it can be further preserved by spraying on several protective coats of clear Krylon to seal the dielectric against moisture. These caps also have excellent RF properties (low inductance) and provide further hash shielding to eliminate RF noise from either entering or leaving the receiver. You'll usually find a spark plate capac-

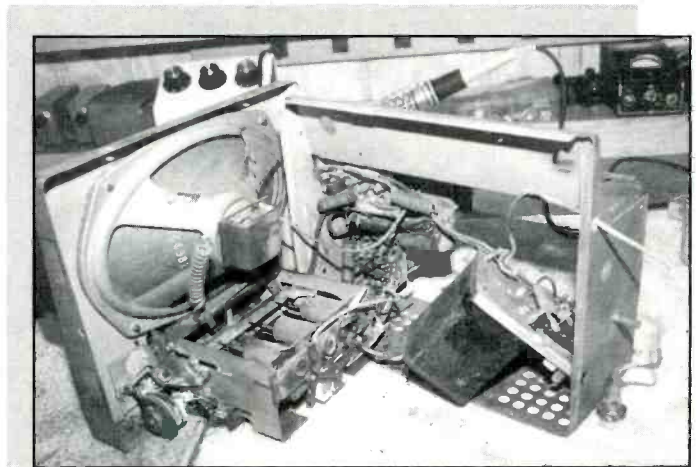


Photo 4. Here is a photo of the receiver being worked on. Normally you wouldn't need to disassemble one of these radios to this degree; I did so to facilitate taking photos as work progressed.

itor at the entry point for the lead carrying the battery voltage to the receiver.

### The Rectifier

This particular Delco used a 0Z4 gas rectifier; this metal tube can be seen in **Photo 3**. Tubes such as the 6X5, 84, 7Y4, 6Z4 and 6X4 (or their 12 volt counterparts) were also popular rectifiers in car radios. The 0Z4 is a *cold cathode* (no filament) full-wave rectifier. It can be replaced with silicon diodes, if some precautions are taken. **Photo 2** shows where I used two NTE506 diodes to replace the 0Z4 tube. These were placed "above chassis" so the next repairman could see what was done, and to prevent someone from attempting to plug in a 0Z4. These gas regulators also have a defined voltage drop, so you should consider adding a power-dropping resistor to compensate for the increase



in B+ when the silicon diodes are used. You also *must* use *fast recovery diodes*; regular 1N4007 diodes can not handle the high switching speeds needed because of the rise and fall times of the square waves present in a vibrator supply! The NTE506 is a good candidate and is readily available. However, good 0Z4s will give many years of service and the tube is readily available and inexpensive.

## Vibrator: Fix, Replace, Or Substitute?

While vibrators are well sealed against the elements, even a car's interior is subjected to dust, vibration, moisture, and seasonal temperature extremes. Even so, after sitting 50 years in a junkyard, few vibrators will jump to life once voltage is applied. Eventually all vibrators reach the end of their serviceable life and will need to be replaced.

This procedure appeared on the Rec.Antique.Radio+Phono newsgroup for cleaning vibrator contacts: For 4-prong vibrators, connect pin 1 of the vibrator (reed and one end of the vibrator coil) to one side of the AC line. Connect pins 2 (pull interrupter contact), 3 (inertia interrupter contact) and 4 (free end of vibrator coil) in parallel, and in series with a 40-watt 115-volt light bulb to the other side of the AC line.

I suggest using an isolation transformer for safety. **Figure 3** shows how this lash up is put together. Run the vibrator for more than a minute. The high voltage easily burns away any oxidation that may have formed on the contacts, while the lamp limits the current to a safe level. A good six-volt vibrator should start with less than five volts applied, and at 10 volts for a 12-volt vibrator. This is where a good variable A battery eliminator comes in handy for troubleshooting car radios.

Many folks have had luck using a bur-nishing tool to rejuvenate vibrator contacts. Unfortunately, unless you know what you are doing you can often do more damage than good. NOS (new old stock) vibrators can be purchased from a variety of sources, and new solid-state replacements are available from Antique Electronic Supply and other restoration supply houses. I purchased a replacement solid-state vibrator (the unit branded Antique Automobile Radio, Inc. in **Photo 3**) to replace the dead Mallory vibrator. I confess that I made no attempt to rejuve-

nate the old vibrator, and as with the 0Z4 diode substitutions, my quest was geared more towards long-term reliability rather than authenticity. Note these replacements are made and sold for both six and 12-volt, as well as positive and negative ground vehicles! What's inside of these units? I suspect nothing more than two cross-coupled power transistors in a simple multivibrator circuit. Two transistors, a few caps and resistors would probably do the job. I didn't want to damage the replacement by cutting it open, but I suspect there is little magic to it.

Does anyone have info on circuits that could be used for homemade solid-state vibrator replacements they'd like to share with us?

Well, I'm out of space, but we've covered the major portions of the power restoration, an important first step! Before electrification, windchargers or rechargeable "A" batteries hit rural USA areas, many powered two, six or 32 volt farm radios with internal vibrator power supplies.


In Part 2 we'll show the remainder of the electrical and mechanical restoration of this classic car radio. See you then! ■

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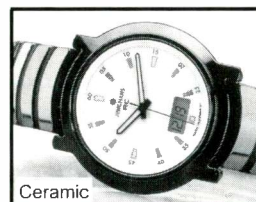
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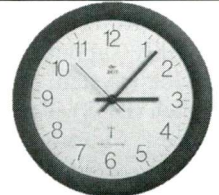
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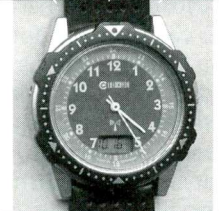
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## RadioShack's PRO-2067 Trunk Tracking Scanner

The RadioShack PRO-2067 is a mobile/base trunk tracking scanner with many new features. It's also the first trunk-tracking mobile scanner from RadioShack manufactured by GRE. Let's see how it stacks up.

As a conventional scanner, the PRO-2067 stacks up quite well. It has 500 channels in 10 memory banks. The 2067 covers the standard bands including VHF-Low (29–54 MHz), VHF Air (108–137 MHz), VHF-Hi (137–174 MHz), Federal and UHF (380–512) and the 800-MHz Public Safety bands from 806–960 MHz (less cellular, of course). Notably missing are the so-called UHF Air or Military Air band from 220–380 and the new (most scanners don't yet include it either) 700 MHz public safety bands. There are very few allocations here yet, but these bands will become more popular as time goes on.



*It's a smart looking radio, with an easy to read display despite the large amount of information presented. This unit fits nicely into a small spot as a mobile unit, and is powered by 12 VDC. It even comes with a DC power cord and mobile mounting bracket.*

***"In addition to its trunking capabilities, the PRO-2067 is one of few radios currently on the market that fully supports both Continuous Tone Code Squelch System (CTCSS) and Digital Code Squelch (DCS)."***

That missing frequency coverage is about the only thing missing from this radio. It will trunk track Motorola Type I and II systems, EDACS, and Johnson LTR (which is not common for public safety, but used extensively for business band systems). All three trunking-type systems can be scanned at the same time if you desire.

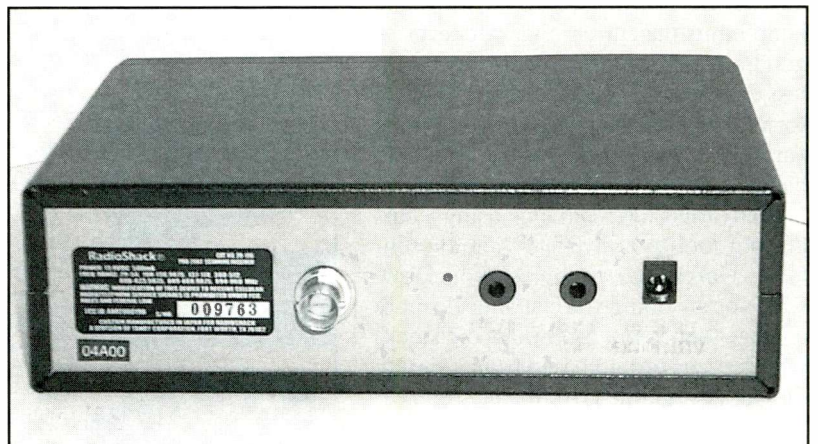
In addition to its trunking capabilities, the PRO-2067 is one of few radios currently on the market that fully supports both Continuous Tone Code Squelch System (CTCSS) and Digital Code Squelch (DCS). The documentation refers to them by their Motorola trademarked names, PL or Private Line for CTCSS and DPL or Digital Private Line for DCS. Don't be confused, they are both the same thing, and both CTCSS and DCS are used by two-way system users to help reduce interference and to make better use of available frequency space. We can use them for this purpose, or we can also use them to help us identify who is transmitting. Either way, it's a very convenient feature to have, and one that makes the PRO-2067 shine as a conventional scanner.

It also appears in casual use that the PRO-2067 is reasonably robust as a receiver. It appears to be fairly sensitive to weak signals, but not be overloaded by stronger ones. I did not do extensive testing or comparison with other receivers in this regard,

but my overall impression is a favorable one from the standpoint of performance.

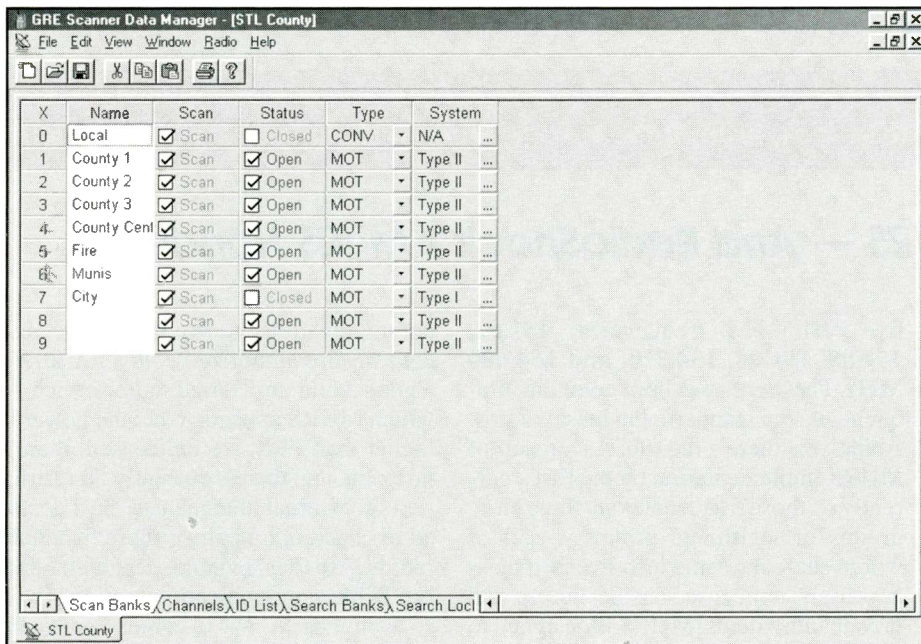
### Programming

Probably the most daunting task of any trunktracking scanner is getting it programmed. The PRO-2067 is no exception, and it might possibly be slightly more complicated because of the myriad of options available. One feature unique to the PRO-2067 and its handheld brother, the PRO-92, is the concept of



*The rear panel is quite clean. The left round black jack (to the right of the antenna BNC) is the PC interface connection. It requires a special cable, which is included in the programming kit. If you buy two PRO-2067s or a PRO-92, a cloning cable is included with the PRO-2067 so that you can copy the data from one radio to another.*





The bank list from the GRE data manager is where data entry starts. Note the bank numbers, like channel numbers, start at 0. All of the settings to program the radio are conveniently accessible from this screen.

open and closed scanning modes. In the open mode, the radio will stop on almost any active signal either in trunked mode or conventional mode.

Closed mode is what we think of as tone squelch or trunked scanning mode. In closed mode, only signals received with the previously stored CTCSS/DCS or Trunked system ID will be received. This is the true tone squelch mode. While you are able to enter a CTCSS or DCS tone in the open mode, it

appears to have no effect whatsoever. If you leave the tone empty, but put the bank into the PL mode, the radio will read the tone received. This is a very convenient feature.

One final user interface note is that several key functions, including the switch from open to closed mode is hidden behind the function key and not labeled on the keypad. With use, these necessary functions become committed to memory, but it makes for frequent trips to the manual in the meantime.

### Function Keys On The 2067

Function UP — Bank Select

Function DOWN — Bank Select

Function 1 (DELAY) — Turn off the delay. This is a global setting. It's also the only function that is marked on the keypad.

Function 2 — Change from Open to Closed mode. Use Func. UP and DOWN to select the desired bank first.

Function 3 — Clear all talk group IDs in one bank. Select the bank first.

Function 6 — Program the text label for a bank.

Function 8 — Program custom fleet maps for Motorola trunked systems.

Function 9 — In the manual mode, access the options menu for contrast. In the Trunking mode, Select an Offset frequency for Motorola UHF-Lo systems.

Function Clear — Clears a memory channel or a talk group ID, depending on mode.

Function PRI — Set the priority frequency.

Function L/OUT — Review the locked out frequencies or channels in search mode or memory channel mode.

Function ENTER — Quick store a frequency tuned in the manual mode into memory in bank 9 only.

Function SEARCH — Enter the search program mode.

Function TUNE — Store a frequency to a specific memory.

### Clone Mode

The saving grace to all this complicated programming is the computer software available as an option. Available as an option (RSU-12204327, but don't go to their site and look for that, as you can't find it because RSU items are only available in the store or by calling the special 800 number from the catalog) for \$69.95. It's also available from Scanner's Unlimited, an excellent retail outlet in the San Francisco Bay area at (650) 573-1624. Be sure to tell Glenn that *Pop Comm* sent you.

The Scanner Data Manager is manufactured by Signal Intelligence (ScanStar is their most popular product). It's a very functional and easy to navigate program. The software kit does include the special cable required to make the connection.

Overall, the PRO-2067 makes a very good mobile or base scanner (it's slightly large for your pocket, although it's smaller cousin the PRO-92 fits that bill). It might be a little difficult for beginners to get used to all the features, but on the other hand, being a beginner and not having pre-conceived notions of how things are supposed to work could well work in your favor. If you've been scanning for a while, you'll want to try and put aside most of what you know about how to program a radio when you work with this one.

The trunking system may not be as robust as other systems on the market, however I was not able to verify this on the system here in St. Louis. A key limitation that has been mentioned is the limit of only one bank of 100 IDs in a trunking bank. There is no facility to turn on groups of IDs within the bank as there is on many of the Uniden and other RadioShack trunktracker scanners. This can be overcome by re-entering a system into multiple banks, and I suppose if your primary interest is trunking, that might be a viable solution. But with only 10 banks, if you have mixed conventional and trunked frequencies to scan, those banks are very precious.

One good thing about RadioShack is their very fair return policy should you decide the radio is unacceptable. With its rich feature set, the PRO-2067 is an excellent choice as a conventional scanner, and many users I have talked with are quite happy with it as a trunked system scanner as well. Check it out! It may find a home in your shack or car! ■



### The Latest On MURS — And RadioShack's MURS Handheld

**M**ulti-Use Radio Service (MURS) is certainly one heck of a hot-button topic not just among radio enthusiasts, but users of the business radio service as well. It's also quite the radio secret. I stopped in a couple of local RadioShack stores here in New Jersey some distance from home where the Shack personnel don't know me. They also didn't know about MURS, although there it is on pages 86 and 87 of their new 2002 catalog.

#### MURS Background

MURS was created as part of the FCC's biennial review of its rules governing Private Land Mobile Radio Service; the order was adopted in June 2000, released in mid-July and made official 30 days after publication in the Federal Register, on November 13, 2000. It's a license-free CB-like communications service using

five VHF FM frequencies: **151.82, 151.88, 151.94, 154.570, and 154.600 MHz.** These are so-called "color dot" frequencies on standard business radios. Ahhh, yes, there's the rub. As a result of MURS implementation by the FCC, currently on those frequencies are three basic groups of legitimate groups — all of whom share the same turf: licensed business users, unlicensed business users, and private individuals. MURS is designed to be a private, two-way, short-distance voice, data, and image radio service for the general public. Power output is maximum of two watts, which is more than enough to reach across town — far beyond FRS, and in some cases, yes, even CB, depending on terrain, of course.

When MURS was getting some major media attention last year we got plenty of calls and letters — mostly from licensed business users, from schools to contractors who were, rightfully so, concerned about unlicensed users causing interference with their communications. But I jokingly told the licensed users not to worry because the FCC rules specifically state, "The channels authorized to MURS systems by this part are available on a shared basis only and will not be assigned for the exclusive use of any entity." It continues, "Those using MURS transmitters must cooperate in the selection and use of channels in order to reduce interference and make the most effective use of channels in order to reduce interference and make the most effective use of authorized facilities." So it goes — the ol' gentleman's agreement. You don't bug me, and I won't bug you. Right — on paper, at least.

Fact of the MURS matter is that the public hasn't rushed out to buy these neat two-watt radios. Motorola and RadioShack are the major MURS players, and even in the Shack's catalog the MURS handhelds would appear to be more business band than private, coming under the top heading "Business Band" radios and accessories.

In a major reversal of its earlier anti-MURS position, Motorola is now riding the MURS bandwagon, basically asking the FCC to limit MURS use to *voice-only*

communications (currently image and data are also authorized). Now I'm all for a good, solid unlicensed radio service — which MURS appears to be; the power is higher than FRS, it's unlicensed, there's no exam, and there's currently no restriction on external antenna use. So I decided to check out a pair of these handheld radios. Are they a viable, personal, family CB-like communications option? Even so, would users have to contend with a lot of business user interference? And frankly, for example, is each handheld RadioShack unit, model 19-1206, selling for \$99.99, worth the price tag?

#### Checking Them Out

Each of the tested handheld transceivers measures about 5 1/2" x 2 3/8" x 1 1/2." The so-called flexible rubber duck whip antenna is, in this case, a very firm rubber antenna that attaches to the radio with a standard BNC connector. This makes removal easy, and attachment of a mobile antenna a simple process.

The 19-1206 transceiver comes with a 7.2 volt, 950 mAh NiCd battery pack that's recharged using the supplied wall adapter. A replacement battery pack can be special ordered at RadioShack stores nationwide.

Accessing the radio's battery compartment requires you to slide two side-mounted tabs forward, and then you simply slide off the rear compartment cover. I initially charged the pack (plug the adapter into the side of the radio — there's no provision for a drop-in charger) for about 10 hours.

These RadioShack handhelds were, of course, initially designed to *look* like business band walkie-talkies; they're rather plain, fit snugly in the hand, and have a minimal number of controls. The volume and squelch are top-mounted. There's a weatherproof speaker/mic jack on the top of the radio and the charging jack is on the right side of the unit. A simple high/low slide power switch on the top changes the radio's power output to either 600 milliwatts or two watts. A small



RadioShack's handheld MURS VHF transceiver is \$99.99.

receive/transmit light on the front of the radio rounds out the features. On the back there's the standard, but very professional feeling, belt clip that's attached with two screws. I used these radios without the belt clip, choosing instead to put the radio in my shirt pocket, not wanting the belt clip to get in the way.

Since there's no "function" button to toggle non-existent bells and whistles on and off, the push-to-talk (PTT) button is large, and has a solid "click" when keyed. There's no fumbling to ensure you've pushed the switch just right to transmit.

My radios came ready to operate on 154.600 MHz. No fuss, no fiddling with programming — just charge the battery and go — which is what we did. Our downtown is about a mile away; the post office is a little less distant. Now make no mistake about it, these radios say "radio!" — they're not toys and therefore pack a pretty good punch. You're also *visible* using one of these radios — certainly today it depends on *how* visible you want to be at any given moment, but please know that you *don't* look like you're having a chat on your cell phone.

My short walk to the post office, through our suburban neighborhoods, was thoroughly enjoyable, partly because I didn't choose a sub-zero day to play radio, but mostly because we had solid, crystal clear copy the entire time. This is no exaggeration, believe me! I thought a couple of times that had this been a CB walkie-talkie (and there's nothing wrong with CB — it's just different than FM) the copy probably would have been about as good, but the antenna, unless you're using a flexible antenna, would be long and unwieldy, and there would be a fair amount of background noise breaking the squelch. Not so with these MURS — well, ahhh, business band transceivers. We even maintained solid contact once I went *inside* the post office, which I really didn't expect. (My wife didn't actually say so, but I think she liked these radios, mostly because we could talk without a lot of dead spots, and there's no channel changing if copy gets rough). Later that night I was checking the radios and preparing to charge each one when I noticed that my radio was on high power, hers was on the "low" power setting. Not bad coverage with using the provided rubber duck antennas!

If you don't need the extra features (that frankly many operators tell me they seldom use anyway), don't get especially excited about GMRS or CB, and FRS'

range just doesn't cut it, check out MURS. I'll be the first to say that last year I was less than excited about this radio service, expecting the worst with possible interference from licensed users and CB-like behavior. I've had these radios several months now and use them quite regularly, and only once did a licensed user hear me, and decide to move to another channel. If you've already got a rooftop or mobile 144 MHz (or scanner discone antenna) your range can easily be greatly increased using one handheld as a "base" while communicating license-free, airtime free with your kids or wife downtown or even at the local shopping center. I say, check 'em out!

The NiCD battery on RadioShack's 19-1206 MURS transceiver typically lasts about four hours using the radio about half the time for actual transmitting on the high power (two watt) setting. I recommend charging the radio after each extended use, or overnight.

On the negative side, I would have preferred the antenna fit more snugly to the top of the radio; it gives the impression it isn't making good contact, when in fact it is, but my personal feeling is that there's too much "play" in the antenna connection. This also requires you to double-check the antenna connection before walking out the door with the radio on your belt.

Overall, I was quite pleased with the RadioShack MURS transceiver. Range was excellent, audio was loud and crystal clear, and the squelch didn't require constant adjustment. It's easy to operate and you can even set your own CTCSS tones to ensure you hear only your units. It's certainly a necessary feature in crowded areas where there are lots of other licensed users sharing your channel. Remember, MURS is a great service that operates well only if all users understand the concept of sharing our radio spectrum.

For more information on the RadioShack rechargeable VHF handheld MURS/business band radio catalog No. 19-1206., visit your local RadioShack store, and be sure to tell them you read about it in *Popular Communications*.

## Down The Road

In our new "On-The-Go" column, featuring CB, FRS, GMRS, MURS and yes, freebanding, we'll be talking about new, exciting two-way radio products, antennas, and installations (mobile and base) in the coming months. I've just received

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the Bilal Isotron 11-meter antenna for a review, which will be coming up in a month or so. This is probably the most unusual CB antenna I've ever seen, but preliminary tests indicate it's a pretty good performer, and especially ideal for limited space installations or where nosy neighbors watch you like a hawk.

I invite your questions, comments, photos, and suggestions for your two-way radio column at [popularcom@aol.com](http://popularcom@aol.com) or by mail to me at *Popular Communications*, 25 Newbridge Road, Hicksville, NY 11801. Please ensure you place your **return address** in the upper left corner of your mail. Not doing so will delay your letter getting read. We appreciate your understanding during these trying times. ■



### Miami Bans Cell Phone Use While Driving

In a now-familiar move, another area has banned the use of cellular phones while driving, citing the danger of driver inattention behind the wheel. The Miami-Dade County Commission has adopted an ordinance banning the use of cellular phones in moving vehicles without the use of a hands-free device. The ordinance, approved by a 6-5 vote, goes into effect in October of 2002. Fines are expected to be **\$250 for a first offense** (or a waiver of the fine upon completion of a driver improvement course), and \$500 for a second or any subsequent violation. Ouch.

### E911 Timeline Extended

Responding to requests by wireless companies, the FCC has agreed to extend the timetable for rollout of E911 technology. The new service, designed to help 911 operators more precisely pinpoint the location of cellular callers, was originally due to be offered beginning October 1, 2001, with full operation by **December 31, 2005**. Though the December deadline is still holding, most wireless companies don't even have a handset on the market that can provide the E911 service. "We can do better than this — we must do better than this. Enhanced 911 will save lives," said FCC Commissioner Michael Copps. The technology is slated to eventually allow location of 67 percent of cellular emergency calls within a radius of 50–100 meters and 95 percent of calls within a radius of 150–300 meters.

### FCC Amends Freq Allocations For 3G

The FCC has amended its table of frequency allocations to open up spectrum for possible use by 3G Third Generation wireless services. A mobile allocation was added to the 2500–2690 MHz band (**ET Docket No. 00-258, RM-9911**), which is currently used by Instructional Television Fixed Service (ITFS) and Multichannel Multipoint Distribution Services (MMDS). The Commission specifically stated "in order to preserve the viability of the incumbent services, we are not relocating the existing licensees or otherwise modifying their licenses." Currently, there are 190 MHz of spectrum assigned to ITFS/MMDS stations in this band, transmitting one-way analog video and two-way digital broadband services.

### GMRS License Fee Change

The FCC has reduced the cost of a new or renewed GMRS (General Mobile Radio Service) license to **\$75**. The reduction is the result of a change in the annual regulatory fee from \$7 to \$5 per year. The application fee remains at \$50.

### Got Your FRN?

Starting **December 3, 2001**, the Federal Communications Commission is requiring an FCC Registration Number from anyone seeking to do licensing business with the agency. The ten-digit FRN, issued by the Commission Registration System (CORES) will be mandatory in order to use the Universal Licensing System (ULS). For more information on how to obtain your own FRN, visit the FCC web site at [www.fcc.gov](http://www.fcc.gov).

### FCC To Hams: "Don't Interfere" And "Keep It Clean"

The FCC has warned five amateur repeater owners that their stations are causing interference and the problems must be resolved. The Commission is cracking down on uncoordinated repeaters that interfere with coordinated repeaters and will be levying fines or taking other action as warranted. In California, an amateur operator who has been repeatedly warned about interference with the W6IER repeater has now been told that the L.A. Field Office will be specifically listening for interference from his station and will issue fines if the trouble continues. In Utah, Steven Decho has been accused of operating an uncoordinated repeater in California that is intentionally causing problems with a coordinated repeater. FCC Special Counsel for Enforcement Riley Hollingsworth has warned Decho to cease or face license revocation or monetary forfeiture.

In related (and welcome) action, Hollingsworth cited two California hams for violation of FCC rules against obscene and indecent language. **Shannon Ratigan, N0JAM**, and **Alan Cole, N6TUA**, were both warned that such behavior on the ham bands is unacceptable. "There is no place in the Amateur Radio Service for (this type of) conduct. It degrades the Service for other users and will not be tolerated," wrote Hollingsworth.

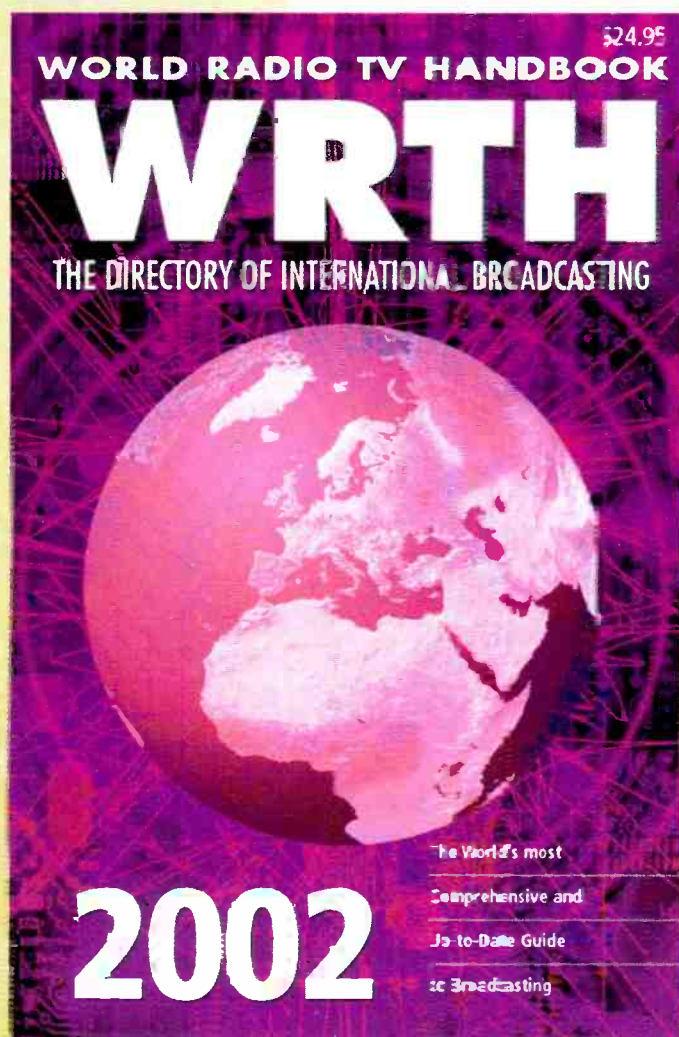
### Court Convicts FM Station Operator

The United States District Court for the Eastern District of Virginia has convicted a Richmond man on four counts of unlawfully operating an FM radio station. **Khalid Kubweza** had previously been the target of FCC and court actions for broadcasting on 91.7 MHz from his home. Even after coming to the attention of the authorities, Kubweza continued to operate his station, forcing the FCC, in conjunction with the U.S. Marshal's Service, to execute a search warrant and seize his radio station equipment. The Virginia Court found that Kubweza "did willfully and knowingly use and operate an apparatus for the transmission of energy and communications and signals by radio from a place in Virginia to another place in Virginia without a license." Unlicensed operation of a broadcast station is a violation of Section 301 of the Communications Act of 1934.

### Cell Phone Manners

Forget about who's listening to your cellular calls on a scanner, instead maybe you should be worried about a new group called CellManners.com. The Boston-based web site that promotes cell phone courtesy has said that it has released a band of volunteer cell spies around the nation to watch for "egregious breaches of cell phone etiquette." The spies — sorry, they're called operatives — are listening for bad manners such as using your cell phone in bathrooms, funerals, and movie theaters, as well as loud behavior such as shouting. Oh, and they'll be listening for good behavior, too. Reports from six major cities will be posted online at [www.cell-manners.com](http://www.cell-manners.com). ■

# LISTEN TO THE WORLD



PUBLISHED DECEMBER 2001

## **Frequency schedules and broadcaster information as updated by**

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## Buying That First Radio

One of the most frequent topics of discussion among scanner enthusiasts is “which radio should I buy?” I’ve had several questions and E-mails lately relating to this issue, so I thought we should take a look. This question comes up very frequently on our weekly conference on AOL, and at other times too.

Sometimes it almost comes down to “Tell me which radio to buy.” I can certainly understand the anxiety of committing to a particular radio, especially for first-time buyers. But even for those wanting to upgrade, there are so many options these days, and it seems to be getting worse. My answer to this favorite question is always — more questions.

### First Radio?

If this is your first scanner and you are just beginning, there are a number of special considerations that you should look at. If you’re upgrading, then you probably have a better idea of the features you’re looking for. We’ll approach this from the standpoint of the beginner for our discussion this month.

Many of the questions I get are from people who are not new to radio, but new to scanning. They’ve been a shortwave listener or AM broadcast listener for some time, but are just now interested in venturing up the dials. A few are from hams or other people who have been introduced to radio in some other way and are curious as to what else there is. In either case, you’ve picked a great part of the radio hobby. So let’s have a look at selecting that first radio.

### Trunking?

This almost has to be the first question on the list these days. If you live in an area that uses a trunked system, the trunk-trackers should be at the top of your list. Many of these radios make excellent regular scanners too, so don’t rule them out even if you don’t need the trunking capabilities right away.

Trunking is a way of using a few radio “channels” or, more correctly, frequencies, controlled by a computer system to create virtual “radio channels.” The advantage of a trunking system is that it offers the users the ability to get a large number of these “virtual channels” without requesting additional frequencies from the FCC. These days, particularly in major metropolitan areas, there simply aren’t any extra frequencies to go around, so anything that can help relieve the congestion is a good thing.

You *can* listen to a trunking system without a trunking scanner, but it’s difficult at best. If the system isn’t too busy you will probably be able to scan the actual frequencies the system uses and hear a good deal of the action. On a busy system, however, it’s almost impossible. What was the frequency for the police department a second ago is now a conversation with the dogcatcher. By the time that finishes and your scanner catches up to the police again, the conversation you were listening to is long since finished.

A trunking scanner can follow the computer signals put out by the system so it knows where that police conversation went.

*If you don't need trunking capabilities, this RadioShack PRO-79 handheld makes a great starter radio. Priced at less than \$100, it makes a great receiver to carry along anywhere.*



*Don't forget the skyhook. Even handheld antennas can often benefit from third party antennas, which offer improved performance. If you're using a base or mobile scanner, antennas can be a major consideration.*



And it can be programmed to ignore the dogcatcher, street department, and anything else you don’t care about. Of course, it can be programmed to ignore the police too, if you’re interested in the dogcatcher or street department.

Trunking comes in different types and your scanner has to know which type is in use so it can understand what the computer signals mean. The most commonly used for public safety applications are Motorola type I, II or III or Ericson’s EDACS. There are a few others too, such as Johnson’s LTR which is used by many business band users. All these types can be received with the newer generation of trunk tracking scanners. There are still a few which cannot, so it’s best to find out about your local system before you make the decision on a scanner.

Learning to use a trunking scanner can be a bit challenging, but it’s certainly doable. In fact, I think that new users learning about scanning for the first time might have the advantage over experienced scanner listeners in this area. It’s easier to learn how a trunking system works from the beginning rather than having to forget all your previous knowledge about other types of scanning systems.



While it may be tempting to start at the top with one of these high-end receivers, they don't generally make good first radios. Get comfortable with a regular scanner first and then find out what makes a communications receiver like this so different.

not what you had in mind, there's not much sense in throwing those receivers into your selection mix. It's simply not fair to compare receivers in the thousand-dollar class with high-end scanners in the four or five hundred range. It's a different class of radio, and the features are completely different. It is likewise true, although perhaps not quite to the same extent, that comparing one hundred dollar scanners and four hundred dollar scanners isn't really fair either. And if it doesn't make sense to you as to why someone would spend that much on a receiver like that, don't. There are legitimate reasons to have receivers in that price range, but they generally make very poor first receivers because they can be more complicated and less convenient to operate. If the scanner bug bites you, you'll come to understand why those receivers can be justified when you're ready to step up to that level. Unless you can explain to someone else (like your spouse) why you need that much of a receiver, steer clear.

## How Many Channels?

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performance occasionally. But for the most part, manufacturers are a valid choice for almost any application if they suit your needs.

## Price Level?

Probably the next most important question after the type of radio is the price level that you're looking at. It's easy to spend literally thousands of dollars on high-end receivers, but if that's

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The next function most people are after is large numbers of channels. Somewhere around 1000 seems to be about the right number for folks to ask for, but 500 or so is also a very comfortable level. In reality, even folks with 400 channel radios don't fill them all up. In fact, I'd guess there are a lot of 200 channel units that aren't full either. I have a 1000 channel receiver with all of 11 frequencies programmed into it, so don't get too wrapped up in channel numbers. As long as the radio has enough to cover all the basic things you'll want to listen to, it'll be fine. Even entry-level receivers these days have 50 or 100 channels, which will be enough to get you started. 200 to 500 channels are about all anyone can listen to and keep track of anyway.

## How Many Banks Do You Need?

This is probably a much more important consideration. The whole idea of banks is to be able to organize and switch in and out channels that are of interest at the time. By having large numbers of small banks, you can divide things up pretty well so that you only have to scan what's of interest at the time. The best radios in this regard have at least 10, but 20 banks are nicer. Only a few of the high-end radios have this many banks that I'm aware of. Computer control can eliminate both the banks and number of channels barrier, so that's also something to think about.

## Frequency Coverage

It used to be that pretty much any scanner would cover the frequency ranges that most of us were interested in. However, in recent years that's changed a bit. One of the biggest areas to have trouble is the military air region from 220 to 400 MHz or so. There are simply not a lot of scanners on the market right now that cover this area. If you're interested in this frequency range, you can eliminate a lot of choices from your shopping list quickly.

Another place to watch is the 800-MHz range, particularly on entry-level radios. No, I'm not talking about the cellular portion of the 800 bands, as no current production radio is going to offer that coverage, but rather the entire 800 range itself. A lot of the introductory radios simply don't provide these frequencies, and there is virtually no way to add a band to a radio that doesn't have it built into the design in the first place. If





The PRO-2067 from RadioShack is a base or mobile scanner with trunktracking capabilities, and can display the channel you're listening to with alphanumeric characters instead of a channel number and frequency!

you're looking at trunking radios we discussed earlier, you're all set. They have the 800 band by default, as that's where all the trunking activity started.

The good news is that in many places in the country, VHF/UHF is about all that's in use and you can live without the 800 bands. You can certainly save a lot of money on the radio that way, and might be an option for a second radio or other application where you don't have a lot of 800 MHz activity anyway.

### Computer Control?

Over the past few years, computer control has really become a viable option for scanner enthusiasts. Both software and hard-

ware interfaces have improved considerably and can now make the marriage of the computer and scanner seem almost a necessity. If you have any leaning toward computer control, think carefully about this as a major factor in your decision. It's easy to spend lots of money on both the receiver and the computer control portion of the system, so watch your budget. You can have lots of fun with some of the medium range receivers by spending a few extra dollars on better software.

It is virtually impossible to gain full functionality from many receivers that simply don't have a built-in computer interface, or an add-on system available for them. Make sure, if you're interested in computer control, that the receiver you buy has that as an option. You can always add it later if they make one, but inventing one from scratch is a bit inconvenient, to say the least. The bottom line is a system you're happy with, and a budget you can live within.

Many of the high-end receivers, including those from AOR and ICOM have computer interfaces built right in. The newer receivers from Uniden and Radio Shack do as well. Several software packages have been developed to support these radios and can really overcome some of the built-in limitations of the radio. A perfect example of this is the high-end ICOM receivers, which tend to have either no banking capability, or a very inflexible bank structure (the top of the line 8500 and 9000 are the exceptions to this pattern). By using a computer control system, you can completely overcome this and have as many banks and channels as your hard disk will hold. In addition, the computer allows you to store information and groups of frequencies that are not in use until they are needed. Rather than reprogramming the entire

# getting started videos

**Getting Started in Ham Radio**— How to select equipment, antennas, bands, use repeater stations, grounding, basic soldering.

**Getting Started in VHF**—Intro to VHF. Repeater usage, packet, satellites and more exotic VHF op modes.

**Getting Started in DXing**— Top DXers share experiences with equipment, antennas, op skills and QSLing.

**Getting Started in Packet**—De-mystify packet. Info on making contacts, bulletin boards, networks, satellites.

**Getting Started in Amateur Satellites**— How ops set up stations. Locate and track ham satellites.

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receiver when something happens, you can simply reload the file and scan away.

Currently, the number of handhelds that support computer control is a bit limited. Many of the handhelds that do have a computer interface are only able to reprogram the radio with that interface, not completely control the radio from the computer. If you think about that for a minute, that's really what you need in a handheld, but you won't be able to take advantage of many of the software features that a true computer controlled receiver will offer.

### How About Alpha Tags?

If you don't want computer control, the next best thing to have is the ability to assign each channel an alphanumeric label. Only a handful of high-end radios currently have this feature, but it is very valuable in larger capacity radios. The BC-780XLT is the main base station receiver that has this feature (leaving out the high-end ICOMs once again). The AOR AR-8200 handheld and a couple of the ICOM handhelds have this feature to one extent or another.

### Do You Want CTCSS?

Continuous Tone Code Squelch System, also known by the Motorola trade name Private Line™, is becoming available on more and more units. If you are in or near a metropolitan area, this is a worthwhile option. Once again, this function is only available on high-end units, and even then may be an add on option. It allows the scanner to avoid a lot of interference that may be problematic in major metropolitan areas where lots of radios are in use.

### Other Buying Considerations

There are lots of other features available from model to model. Some folks would



*These guides are handy to have, and provide some good basic instruction in their introductory pages as well as frequency reference information to get you started. Police Call is available at RadioShack, Monitor America is available at many bookstores and many radio supply stores.*

and ask the "panel of experts" that frequent the conference. But ultimately, only you will have to live with your final decision. Good luck!

### Frequency Of The Month

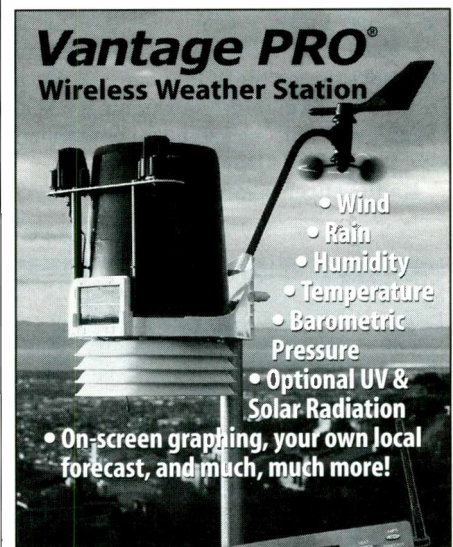
Our frequency this month is **462.6625**. Have a listen and see what you hear. It may be interesting to listen over a few days, or you may not hear much of anything. Depending on where you are, you may not hear much of anything no matter how long you listen, but you might too. Let me know what you find and we'll enter you into the drawing for a free subscription.

### Your Input Needed!

I'm always looking for your input. Got any search results to let us in on? How about some pictures of your new radio in operation? Send them in! E-mail at [armadillo1@aol.com](mailto:armadillo1@aol.com), or the normal stuff to Ken Reiss, 9051 Watson Rd. #309, St. Louis, MO 63126. Until next month, Good Listening!

not own a scanner without search lockouts, others never use a scanner's search function. Auto search and store is a handy feature too, if you do any searching.

Selectable attenuation, delay function, priority operations, service search, weather scanning or alert functions, selectable modes, and tuning dials are also features that have various amounts of importance depending on who you talk to. Look around and collect some catalogs and dive in. Once you've narrowed the field a bit, start asking around and see if you can find folks who have used the receivers you're interested in. Join us on the AOL Radio Listener's Conference

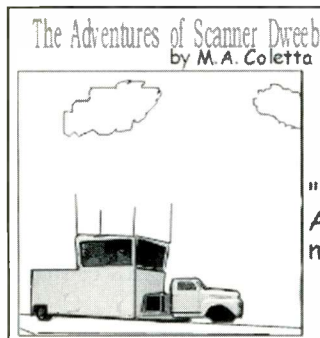


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## KAOS: Your Mama?

Here we go again. **Radio KAOS, 6955 USB** at 0249 with "White Bird," "Romeo and Juliet," IDs and mention of Belfast drop at 0300. Then a Rolling Stones song. At 0308: "You are listening to Radio KAOS — K. A. O. S. — your mama." Then another song. (Silvi, OH)

**Borderhunder Radio, 15795** at 2148 with IDs, Fleetwood Mac, Queen, and others. Started out with a fair signal but then some deep fades by 2208. (Silvi, OH)

**WVDA, 6955** at 0253. A couple of songs, IDD as "WVDA, the Voice of Distorted Audio," and gave E-mail address of wvdapirate@yahoo.com. (Silvi, OH)

**Classic Rock Radio, 7470 USB** at 0410 with many IDs, songs by the Animals, Springstein, Pink Floyd and many others. (Silvi, OH)

**Radio Doomsday, 6955 USB** at 0332 with many IDs. Address as c/o SRS News, Ostra Porten 29, DS-442 Ytterby, Sweden. Also an E-mail address I couldn't catch. (Silvi, OH) 6955 USB at 0230 mentioning, "Radio Doomsday is effective for affecting ineffective tools" and "Welcome to the psychic connection on Radio Doomsday." Off or lost at 0230. (Bill Short, MS)

**Psycho Radio, 6955 USB** at 0120 and 0235. (Silvi, OH)

**United Patriot Bingo Radio, 6955 USB** at 0138. (Silvi, OH)

**KRAQ, 6940** at 0420 with the Carl and Frank Show and some very noisy music, profane talk. (Bill George, TN)

**KRMI, 6955 USB** at 0430 with rock and pop and rap numbers. IDs as Radio Michigan International and a mention that they were located in Port Huron, Michigan. (George, TN) 0200 with "Welcome Back" and some other number. Talking about having a new transmitter. (Don Bagley, PA)

**Radio Three, 6955** at 0253 hosted by Sal Amoniac with music

## KIPM Outer Limits

### *Illuminati Prima Materia*

Listing of show titles:

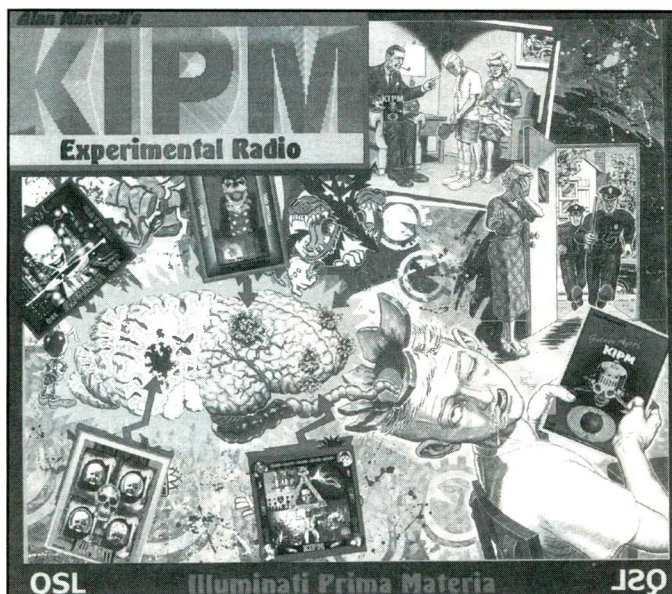
Show 1: Traffic Report Obscura	Show 13: The Dead Zone
Show 2: God, Illuminator of Our Lives	Show 14: The War Hounds
Show 3: Primordial Time Journey	Show 15: Questions
Show 4: Ramblings From the Heart of Darkness	Show 16: The Hollow Earth
Show 5: Entropy	Show 17: The Hollow Earth Bonus Show
Show 6: Electromagnetic Madness	Show 18: The Adversary
Show 7: Arcelbo Alpha 1	Show 19: The HAARP Show
Show 8: Reverend Maxwell's High Frequency Church	Show 20: He Who Shrank
Show 9: The Saga of Wally Hymen	Show 21: Monsters of the Mind
Show 10: The Truth	Show 22: The Clockwork
Show 11: Strange Cargo	Show 23: He Who Evolved
Show 12: Secret Bonus Show	Show 24: The Accursed Galaxy

9 + Unique QSL designs are currently available from KIPM to our listener writer audience.

CD studio copies of past shows available for a donation you feel worthy of the material. This will help further support KIPM pirate broadcasts in the future.

You can reach KIPM at: [KIPM\\_Outerlimits@hotmail.com](mailto:KIPM_Outerlimits@hotmail.com)

*KIPM has an intriguing line up of shows, all available on tape.*



Here's another big, wild, full color QSL from KIPM. There are at least nine different designs.

and mentioning "3 Rock" Didn't hear any mail drop announced. Went off about 0310. (George, TN)

**WHYP, 6950 USB** at 0212 with Sal Amoniac again and talk of playing croquet. Several WHYP IDs. (George, TN)

**Boredom Radio, 6955 USB** at 0648 with song "Waiting for the Sky to Fall." Said he was using just five watts. No mail address given but asked that reports be sent to *Pop'Comm*. (That's a sure ticket to no reply! — Ed) (Bagley, PA)

**Crunch Radio, 6950** at 0352 with really old songs from the Stephen Foster period. Another one who didn't give any info on how to contact them. (Bagley, PA)

**WAAR — American Anti-Terrorist Radio, 26500** at 1741 with patriotic songs and fake, odd-sounding IDs. Very poor and soon lost. (Bagley, PA)

**Unidentified — 6955** at 0159 to 0247 close. Possibly Radio Bingo. Giving bingo numbers plus clips of Radio Tornado, Captain Ron, music and other stuff. (Silvi, OH)

**Z-100, 6955 USB** at 2350 rock old rock numbers and man announcer plus jingle IDs. No address heard. (Bagley, PA)

And that's all you wrote! Nice to see a couple of new folks checking in this month. I am sending out a search party for the no-show pirate regulars!

Please keep those reports coming. You can send them through the regular mail to *Pop'Comm* HQ or to my attention at popular-com@aol.com. And how about some copies of QSLs or station pics to use as illustrations?

I'll be back with more reports for you next month! ■

# 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, Tanjung Press in Serbia, Iraqi 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

## 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.

**Receives** strong, clear signals from all over the world. 20 dB attenuator, gain control, ON LED.

Switch two receivers and auxiliary or active antenna.

MFJ-1024 \$139<sup>95</sup> 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

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

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. 3 1/4x1 1/4x4 in.



-- all over the world --  
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**Printer Monitors \$179<sup>95</sup>**  
**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 --

## Eliminate power line noise!



MFJ-1026 \$179<sup>95</sup>

**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<sup>95</sup>  
**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<sup>95</sup>  
**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<sup>95</sup>  
**High-gain, high-Q** receiver preselector covers 1.8-54 MHz. Boost weak signals 10 times with low noise dual gate MOSFET. Reject out-of-band signals and images with high-Q tuned circuits. 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<sup>95</sup>

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

**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-956 \$49<sup>95</sup>  
MFJ-1046 \$99<sup>95</sup>  
**New! Improves** any receiver! Suppresses strong out-of-band signals that cause intermod, blocking, cross modulation and phantom signals. Unique Hi-Q series tuned circuit adds super sharp front-end selectivity with excellent stopband attenuation and very low passband loss. Air variable capacitor with vernier. 1.6-33 MHz.

## Easy-Up Antennas

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.

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. 5 1/4x2 1/2xHx5 1/4"D inches.

## No Matter What™ One Year Warranty

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.

## MFJ Antenna Switches



MFJ-1704 \$64<sup>95</sup> MFJ-1702C \$24<sup>95</sup>  
**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

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## 21 Band World Receiver

MFJ's MFJ-8121 new 21 Band World Receiver \$39<sup>95</sup>  
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	UTC	Freq.	Station/Country	Notes
0000	21740	Radio Australia		0300	13675	UAE Radio, Dubai, UAE	AA
0000	4717	Radio Yura, Bolivia	SS	0300	11675	Radio Kuwait	AA
0000	4755	Radio Educacao Rural, Brazil	PP	0300	11980	Radio Rossii, Russia	RR
0000	11955	Radio Nacional, Angola	PP	0300	17675	Radio New Zealand Intl	
0000	13650	Radio Japan/NHK		0300	11920	RTV Marocaine, Morocco	AA
0000	15150	Voice of Indonesia		0300	4976	Radio Uganda	
0000	3280	La Voz del Napo, Ecuador	SS	0300	9870	Radio Prague, Czech Republic	
0000	9737	Radio Nacional, Paraguay	SS	0300	6536	Radio Huancabamba, Peru	SS
0000	5770	Radio Miskut, Nicaragua	SS	0300	9965	Voice of Russia, via Armenia	SS
0030	6040	Radio Clube Paranaense, Brazil	PP	0300	9780	Republic of Yemen Radio	AA
0030	11690	Radio Vilnius, Lithuania		0300	4819	La Voz Evangelica, Honduras	SS
0030	15425	Sri Lanka Broadcasting Corp.		0300	17725	Radio Jamahiriya, Libya	AA
0030	12015	Radio Free Asia, USA via Sri Lanka	unid	0320	15435	Voice of Africa, Libya	EE/other
0100	11885	Voice of Turkey	TT	0330	7265	Sudwestfunk, Germany	GG
0100	15485	Radio Pakistan	Urdu	0330	12050	Radio Cairo, Egypt	AA
0100	6025	Radio Amanacer, Dominican Republic	SS	0330	12095	BBC, England, via Cyprus	
0100	6190	Radio Slovakia Int'l, Slovak Republic		0330	12040	Radio Ukraine Int'l	
0100	5015	Radio Pioneira, Brazil	PP	0330	7200	Republic of Sudan Radio	AA
0130	9870	Radio Austria Int'l		0330	9795	Voice of Vietnam, via Canada	
0130	21550	Christian Voice, Australia		0330	6940	Radio Fana, Ethiopia	Amharic
0130	6155	Radio Telefis Eireann, Ireland, via England		0330	3240	Trans World Radio, Swaziland	unid
0130	9640	Radio Studio/Radio Gardarika, Russia	RR/EE	0330	7215	Trans World Radio, South Africa	unid
0130	3250	Radio Luz y Vida, Honduras	SS	0345	7290	Voice of America, via Sao Tome	
0130	15295	RDP Int'l, Portugal	PP	0345	5010	Radio Tanzania	unid
0200	6180	Radio Nacional Amazonia, Brazil	PP	0400	17690	Voice of Russia	
0200	7210	Radio Minsk, Belarus		0400	7175	Radiodue, Sicily (Italy)	II
0200	9625	CBC Northern Service, Canada		0400	11665	Voice of Tartarstan, Russia	RR
0200	15340	Radio Romania Int'l		0400	4991	Radio Apinte, Surinam	
0200	9605	Vatican Radio	SS	0430	9420	Voice of Greece	Greek
0200	11710	Radiodifusion Argentina al Exterior		0430	9570	Radio Budapest, Hungary	
0200	6185	Radio Educacion, Mexico	SS	0430	4770	Radio Nigeria	
0200	6973	Galei Zahal, Israel	HH	0430	9635	Radio Nacional, Colombia	SS
0200	11620	All India Radio	Hindi	0430	6235	Trans World Radio, via Albania	Slovak
0230	7160	Radio Tirana, Albania		0500	7110	RTV Tunisienne, Tunisia	AA
0230	17875	Radio Japan/NHK		0500	7255	Voice of Nigeria	
0230	9820	Radio Havana Cuba		0500	5960	Adventist World Radio, via South Africa	
0230	4965	Christian Voice, Zambia		0600	5100	Radio Liberia Int'l	
0230	9885	Swiss Radio Int'l		0600	4760	ELWA, Liberia	
0230	9985	Radio Denmark, via Norway	DD	0600	5025	Radio Rebelde, Cuba	SS
0230	9665	Voice of Russia, via Moldova		0630	15135	YLE — Radio Finland	FF/EE
0245	6165	Zambia Broadcasting Corp.		0630	9895	Radio Netherlands	DD
0245	9770	BBC, England, via Seychelles		0645	12070	Radio Tikhy Okean, Russia	RR

UTC	Freq.	Station/Country	Notes	UTC	Freq.	Station/Country	Notes
0700	9870	Trans World Radio, Monaco		1330	15395	UAE Radio, Dubai, UAE	
0700	6350	Radio Union, Peru	SS	1430	11905	Sri Lanka Broadcasting Corp.	
0730	3290	Voice of Guyana		1430	21600	Broadcasting Service of Kingdom of Saudi Arabia	AA
0730	9530	Magadan Radio, Russia	RR				
0800	11765	KNLS, Alaska		1500	13765	Vatican Radio	
0800	11925	Radio Bandeirantes, Brazil	PP	1500	15445	YLE — Radio Finland	Finnish
0900	15210	Radio Cairo, Egypt	AA	1500	12075	Radio Netherlands, via Uzbekistan	
0900	4980	Ecos del Torbes, Venezuela	SS	1500	13800	Radio Norway	NN
0900	9675	NBC, Papua New Guinea		1500	13760	Voice of Korea, North Korea	
0900	6115	La Voz del Llano, Colombia	SS	1630	17795	Qatar Broadcasting Service	AA
0900	3325	Radio Maya, Guatemala	SS	1700	17705	Voice of Greece, via Delano, CA	Greek
0930	9280	Voice of Asia, Taiwan	CC	1730	21720	Swiss Radio Int'l	
0930	5020	Solomon Is. Broadcasting Commission	Pidgin	1730	15475	Africa Number One, Gabon	FF
0930	6060	Radio Nacional, Argentina	SS	1730	17805	Radio Romania Int'l	
0930	4389	Radio Imperio, Peru	SS	1730	17535	Kol Israel	HH
0945	4875	Radio Difusora Roraima, Brazil	PP	1800	21700	Radio Exterior de Espana, Spain	SS
1000	4824	La Voz de la Selva, Peru	SS	1800	17870	Channel Africa, South Africa	
1000	3905	Radio New Ireland, Papua New Guinea	Pidgin	1900	15190	Radio Pilipinas, Philippines	
1000	6150	Radio Singapore		1900	15475	Radio Salama, Nigeria, via England	
1000	3300	Radio Cultural, Guatemala	SS	1930	9960	Voice of Armenia	
1030	6798	Ondas del Rio Mayo, Peru	SS	1930	15445	Voice of America relay, Botswana	
1030	5954	Radio Casino, Costa Rica	SS	2000	17560	Radio Exterior de Espana, Spain	AA
1030	6348	Armed Forces Network, Hawaii	USB	2000	15345	RTV Marocaine, Morocco	AA
1100	7260	Radio Thailand	VV	2030	15530	Radio Ukraine Int'l	SS
1100	4890	NBC, Papua New Guinea		2030	17580	Swiss Radio Int'l	GG
1100	7260	Radio Vanuatu		2100	12689	Armed Forces Network, Florida	USB
1100	12085	Voice of Mongolia		2100	15195	AWR - Voice of Hope, via Austria	
1100	6155	Radio Fides, Bolivia	SS	2100	21740	HCJB, Ecuador	
1100	3945	Radio Tampa, Japan	JJ	2130	11900	Radio Bulgaria	
1100	4960	Radio Federacion, Ecuador	SS	2200	15545	Radio Prague, Czech Republic	FF
1100	4052.5	Radio Verdad, Guatemala	SS	2200	11845	Voice of Turkey	
1130	9600	Radio Singapore Int'l		2200	15084	Voice of Islamic Republic of Iran	Farsi
1130	4840	Heilongjiang People's Radio Stn., China	CC	2200	9735	Sultanate of Oman Radio	AA
1130	6520	Voice of Korea, North Korea	KK	2215	15760	Kol Israel	HH
1200	7340	Petropavlovsk Radio, Russia	RR	2230	6249	Radio Nacional, Equatorial Guinea	SS
1200	9965	Voice of Hope/KHBN, Palau		2230	11820	Broadcasting Service of Kingdom of Saudi Arabia	AA
1200	15625	Radio Pakistan	EE/unid				
1200	11675	Radio New Zealand		2230	11830	Vatican Radio	CC
1200	7270	Radio Malaysia	unid	2230	5985	Radio Congo	FF
1200	7130	Radio Taipei Int'l	JJ	2230	11785	Deutsche Welle, Germany	GG
1200	15515	Radio France Int'l	FF	2230	12065	Far East Broadcasting Co., Philippines	
1200	15295	Radio Tashkent, Uzbekistan		2230	11800	RAI Int'l, Italy	II
1200	9930	KWHR, Hawaii		2230	11975	China Radio Int'l, via Mali	CC
1200	15125	Radio Republik Indonesia	II	2230	21550	Voz Cristiana, Chile	SS
1200	11710	All India Radio	Burmese	2230	11630	China National Radio, China	CC
1200	11820	Radio Polonia, Poland		2230	7125	RTV Guineenne, guinea	FF
1215	7260	Voice of America relay, Thailand	unid	2300	12020	Voice of Vietnam	VV
1230	5765	Armed Forces Network, Guam	USB	2300	13640	Deutsche Welle, Germany	
1230	11580	Far East Broadcasting/KFBS, Saipan, N. Marianas		2300	5990	Radio Senado, Brazil	PP
1230	15585	Voice of Islamic Rep. of Iran	Farsi	2300	6150	Radio Record, Brazil	PP
1230	15495	Radio Sweden	Swedish	2300	12085	Radio Damascus, Syria	SS
1230	15445	Far East Broadcasting Corp., Seychelles	unid	2300	15575	Radio Korea Int'l	KK
1300	7265	Radio Veritas Asia, Philippines	unid	2300	15345	Radio Nacional, Argentina	SS
1300	7445	Voice of Asia, Taiwan	CC	2300	11775	Radio Romania Int'l	
1300	11690	Radio Jordan	AA/EE	2300	9945	Radio Norway	NN
1300	6937	Radio Yunnan, China	CC	2330	9705	Radio Mexico Int'l	SS
1300	15385	Adventist World Radio/KSDA, Guam		2330	17695	Radio Canada Int'l	
1330	13670	Radio Korea Int'l		2330	4815	Radio Burkina, Burkina Faso	FF
1330	6570	Myanmar Defense Forces Station, Burma	vern.	2330	11905	Swiss Radio Int'l, via Fr. Guiana	



## radios & high-tech gear

review of new, interesting and useful products

### Alinco Introduces DJ-596 Dual Band HT — First Amateur HT To Support Optional Digital Voice Comms

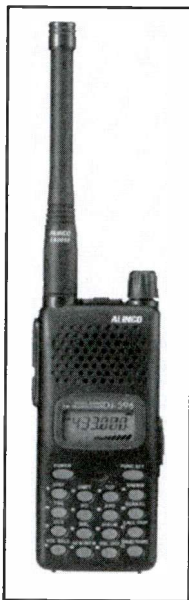
Alinco is introducing the DJ-596 VHF/UHF HT, a compact unit that can transmit up to 5 watts output on the 2-meter and 70-cm bands in analog wide or narrow FM and the optional EJ-43U digital board, digital voice communications are possible. The announcement of the new unit was made by Craig Cota of ATOC Amateur Distributing, which distributes Alinco products to dealers in the USA and Canada.

The DJ-596 has 100 memory channels, full coverage of the 2-meter and 70-cm USA amateur bands, extended receive capabilities, CTCSS and DCS encode+decode, three scan modes, the ability to work and save in memory any number of "odd split" transmit/receive offsets and it can transmit and receive in both the wide and narrow FM modes. A nickel metal hydride battery is standard and the unit will accept and operate on a wide range of input voltages, from 6–16 Vdc. Illuminated keys and display add to operator convenience in low-light conditions. The large display can also show alphanumeric designations for each memory channel. A theft alarm and experimental "mosquito repelling sound" are among the unique features, along with more traditional items such as nine autodial memories. A new feature is External Terminal Control, which can output 5 VDC at 5 mA from the mic jack, which can be used by experimenters to control external devices.

Alinco is also introducing an optional Digital Voice Communication Board, EJ-43U, that can be used in conjunction with similarly equipped DJ-596 to achieve digital voice communications. Simultaneously, Alinco is introducing the EJ-40U Digital Voice Communications Board for use in its new line of mobile radios, the DR-135/235/435 series.

The digital boards allow the operator to easily select between analog FM communications and digital voice operations. The Alinco digital boards use the open ITU-TV.32 protocol. This processed signal modulates the VCO in GMSK direct frequency modulation using a GMSK-Modem. It is then transmitted as a 20F3E conventional FM signal.

Alinco terms these boards as a "first step" in the use of digital communications by an Amateur Radio manufacturer. It acknowledges that the digital audio has a "processed" sound due to several limitations, specifically restrictions on bandwidth, the ability of the transceiver to switch between analog and digital operations and cost constraints that keep the unit



Alinco's brand new DJ-596 amateur dual band HT carries a suggested retail price of \$301.95.

affordable for the widest possible audience. It added that commercial digital radios have price tags in the thousands of dollars, while the DJ-596 is very competitively priced in the dual-band amateur radio marketplace, with an MSRP of \$301.95. ("Street" prices set by dealers are often lower than the MSRP.)

Alinco emphasizes that the digital protocol used is an open format and is no different in principle from the use of other widely used digital protocols such as AX.25, Pactor, GTOR, PSK 31 and the like. Signals transmitted from the units are not encrypted and can be monitored by any similarly equipped unit or any station able to receive and decode the ITU-TV.32 protocol. Alinco has posted a detailed FAQ about its digital operations at its website, [www.alinco.com](http://www.alinco.com).

The DJ-596 is designed in accord with Alinco's "Simple, Clean, Dependable" philosophy. As such, controls are kept to a minimum with an emphasis on easy operations. The frequency can be input directly from the keypad, then saved into memory. The volume and squelch levels are set by pressing the appropriate key then turning the dial to the desired level, which is preserved electronically, reducing the chance that settings could be unintentionally be changed. The 100 memory channels are easily programmed and can be allocated in any combination of VHF or UHF frequencies. The transceiver can also operate in a split-band mode. Additional user-activated options include time-out timer, busy channel transmit lockout, battery save, scan modes, and more. The DJ-596 can also be used for 1200 bps packet operations with an external TNC.

The DJ-596 can output a full five-watt signal yet weighs just 11 oz. It has a standard BNC antenna connector and has an amazing ability to accept a wide range of input voltages, from 6–16 VDC. While connected to an external DC power source the NiMH battery is recharged but not overcharged.

### New Cobra Radar Detector With Weather Alert System

Cobra Electronics announces the availability of the industry's "first," breakthrough radar detection product designed with the safety needs of drivers in mind. The 9220WX continues Cobra's tradition of innovation with a 9-band product that features 10 NOAA (National Oceanic Atmospheric Administration) weather channels and a weather alert system.

Cobra's new ESD-9220WX radar detector is a full-featured system with weather alert.



The 9220WX is now available for a suggested retail price of \$189.95 and can be found at major retail outlets across the nation including Cabella's, Circuit City, Fingerhut, K's Merchandise, Sears, Spiegel, and Stereo Advantage.

"Cobra continues to redefine and lead the radar detection market with the addition of new features like the 10 NOAA weather channels and the weather alert system that keep drivers aware of weather conditions," said Tony Mirabelli, senior vice president, marketing and sales for Cobra Electronics. "This is yet another example of how Cobra designs products to increase the awareness and safety of drivers and passengers.

"The addition of a 10-channel weather radio and weather alert system distinguishes the 9-Band Cobra ESD-9220WX as another market leader. To keep drivers aware of impending weather conditions such as hurricanes or tornadoes, the ESD-9220WX weather radio has 10 frequencies, as well as NOAA (National Oceanic Atmospheric Administration) Weather Alert. The ESD-9220WX also includes the standard eight monitoring system (X, K, KA, VG-2, Ultra Lyte Laser, LTI 20-20, ProLaser, ProLaser III), plus Safety Alert and Strobe Alert.

Cobra Electronics is a leading global manufacturer of two-way mobile communication products, holding the number one or strong number two position in every market in which it does business. The Family Radio Service business is one of the fastest growing segments of two-way mobile communications and Cobra is a leading provider in the U.S., Canada, and Europe. Cobra has a 40-year track record of innovation and award-winning products, and leads the industry in developing technology applications that serve the market. To learn more about Cobra Electronics and its products, please visit the Cobra site at <http://www.cobra.com>.

## C. Crane Company's New QuickCharger™ Battery Charger

C. Crane Company announces a new standard in battery chargers – their QuickCharger™. With digital camera sales expected to top the 40 million mark by 2005, more consumers than ever are going to need an advanced battery charger. Designed to prevent memory effect and over-charging, the QuickCharger™ keeps NiMH and NiCd batteries running longer and more efficiently. Its sophisticated microprocessor eliminates guesswork.

Bob Crane, president of C. Crane Company said, "We tested a lot of battery chargers before we went with this one. Once you see the performance and realize it does all sizes of batteries, you know there's just no other battery charger like it."

The QuickCharger's features include:

- Recharges up to four D, C, AA, AAA batteries
- Analyzes batteries for their charge and capacity, rejecting damaged batteries
- Negative pulse charging and Intelligent Discharge System (IDS) prevents memory effect and overcharging
- Soft Start function prevents overheating of battery — helping to extend battery life
- Can fully charge 2 AA Nickel Metal Hydride batteries in about 2 1/2 hours
- Batteries may be stored in the charger in a topped-off state without having to worry about over charging.

The new charger retails for \$49.95 and is available from C. Crane Company at 800-522-8863 or on the web at [ccrane.com](http://ccrane.com).

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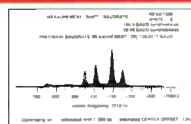
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## In The Aftermath: Aircraft Monitoring Basics

Welcome to a rather solemn article written in the shadows of the recent terrorist attacks on our soil. I'm writing this less than four weeks after the attacks while our military is in their initial phases of the armed war on terrorism. Originally my article was going to be on monitoring air refueling, but that will be delayed for a few months. This column will be devoted to monitoring of airliners and some misconceptions of what is heard. The next few columns will be devoted to returning to the basics of monitoring aviation.

When tragedies occur, such as what happened in New York, D.C. and Pennsylvania this past September, many, though not all, in the news media wish to get as much information as possible out to the public in order to "scoop" the competition. Invariably questions arise such as, "Was there a bomb on board?" or, "Was there controller error?" The problem with such questions being asked immediately after such a tragedy is that there can be no immediate answers. All sources of information must be looked at in order to explain what happened. As a result, I had to deal with an acquaintance on a message board on the day of the hijackings. I am placing here the exchange that took place over a couple of days. The only things changed were the identifications of the two of us, and a little bit of spelling. Be advised that at the time of this exchange we had no official clue as to who was involved.

### Major Tom:

They got cockpit recordings now of the hijackers with the broken English and Arabic accents. Anybody still DECEIVED with this "maybe it's McVeigh-like stuff"?!?!??

### Mr. ATC, Major, and all:

As of this moment the Cockpit Voice Recorders (CVRs) have not been recovered and accordingly, no tapes of what occurred in the cockpit have been released by the appropriate authorities. All radio and landline communications at all U.S. civilian and military air traffic facilities are recorded, usually on 24-hour multi-channel tape recorders. Each day these tapes are removed and replaced with blank tapes. Tapes removed are archived for a minimum of 15 days, then, should there be no inherent need to keep them for a further amount of time, are erased and placed back in circulation. After a few months these tapes will be permanently removed from service.

In the event of accidents, incidents, terrorism, etc. the tapes are removed from service immediately and placed in storage for use by the appropriate authorities in investigating the accident/incident, etc. These tapes, and any written transcripts of the tapes, are public record, but are not normally immediately released. These tapes, which are from all airport traffic control towers, approach controls, air route traffic control centers, and flight service stations if they were the least bit involved, are now in the hands of the Department of Transportation and/or the FBI.

If there is anything released as of today, September 12, 10:30 p.m. EDT it is from 911 tapes where certain passengers using their cell phones had called 911. You can be assured that, in light

of the terror of yesterday, these air traffic control tapes and transcripts as well as the audio and transcripts of the CVRs will be released, but not yet!

I've been involved with numerous incidents and a handful of accidents over my 29+ years of air traffic control, including a fatal accident in August of 1989 when a Beechcraft Queenair 65 crashed in front of the tower I was working in Albany, GA. I do not wish to relive that. I also know that it was a week or two before the tapes and transcripts were released. But they were released. This is time consuming, I know, but all of the investigating authorities wish to ensure the accuracy and validity of the tapes and transcripts. More information will be forthcoming, but being in the business for nearly 30 years, I will not jump to conclusions.

### Major Tom:

Sir, the MICROPHONE in the cockpit of one of the planes was on for a while, it was on the news.

### Mr. ATC:

I understand that. The only way, at this time, that the tape could be available would be if someone with an aircraft scanner was taping it. These scanners are available at all RadioShacks and many other electronics stores. They range from just about \$100 to literally close to \$10000, depending on the source.

### Shameless Plug

I'm going to blow my own horn here. To get as much information as possible on listening to pilots and air traffic controllers get either *Popular Communications* magazine or *Monitoring Times* magazine. The columns are "Plane Sense" in *Pop'Comm* and "Plane Talk" in *MT*. I ought to know, cause I'm the aviation editor for *Pop'Comm* and write the "Plane Sense" column.

If you wish to listen to pilots and controllers get a scanner that covers frequencies 118.0-134.975 MHz. Frequency lists are usually available at RS and I update frequencies monthly in *Pop'Comm* is a hobby of mine. Been listening to shortwave since the 1960s, have a second-class radio telephone license for when I was a DJ at an AM Christian radio station in Albany, Georgia, and am an amateur radio operator — KG4KGC, formerly KBOULJ. I'm also a certified Communications Officer for the Civil Air Patrol — FLORIDA CAP 388 (thus my i.d. of flacap388). Be glad to answer any questions.

Bill

KG4KGC

ex-KBOULJ

FLORIDA CAP 388

WPE4JZZ

flacap388@hotmail.com

mr-atc@att.net

### Major Tom:

So what's your message, then? Don't watch the Zapruder film, it hasn't been "cleared" yet?!?!??

**Mr. ATC:**

No, there is no conspiracy to keep information from the public. I encourage people to listen to their radios and scanners. But when you get only a short taped radio blurb then you cannot get the full picture. It must come from various pieces to see the whole puzzle. Only the CVR's can give what is actually occurring, or what actually occurred, in the cockpit. Only the tapes made by the ATC facilities can show the coordination and other radio transmissions being made. Only the second black box located in the vertical stabilizer with the CVR can give the information on what controls, buttons, dials, and levers were used. Then, and only then, when all these pieces of the puzzle are available and put together, can we see what happened. A few seconds recorded by a fellow scanner enthusiast can only give the briefest of glimpses as to what happened.

We live in a society that allows you and me to listen. There are some states, such as Michigan, which attempt to implement laws like in Nazi Germany, in order to keep scanner radios either out of the hands of law-abiding citizens, or at the very least severely restrict them. The various Federal Communications Acts over the years give you and me the right to listen to anything that is transmitted, with the exception of cordless phones, cell phones, and encrypted transmissions. You are authorized to listen to anything else, including transmissions made in the clear to Air Force 1, any Airborne Command Post or AWACS aircraft, or any in the clear military command post.

When the tapes are released, and they will be, the only things that will be edited out will be expletives. This is under Federal law. Say what you wish. When they are released the only thing that you can say is "sanitized for your protection" will be the expletives. Glad to know this brief transmission was recorded, just keep in mind it is far from being the complete picture. And that will take weeks, or even months to finish.

Bill

**How It Works**

These few previous statements were made over a two-day period following the hijackings. Since then I've been asked about ATC procedures involving hijackings, i.e. how do we know a hijacking is in progress and about pilots' and controllers' responsibilities. To make terse I

won't say much. It's not that I cannot, but I won't. The reasoning is though the information is not classified in the classic sense — "Confidential," "Secret," "Top Secret," "Top Secret — NOFORN", or any other classification, it is considered FOUO — "For Official Use Only."

Suffice it to say that ATC uses two different types of RADAR. The first type is called primary or raw radar. This is the actual "blip" that returns to the RADAR antenna. The size of the "blip" is determined by the size and reflectivity of the target and the distance from the RADAR antenna. Approach controls use this with

secondary RADAR, which I will discuss in a moment.





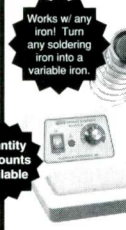

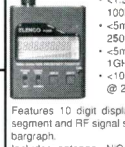







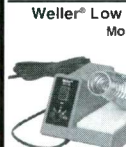



Primary RADAR returns are what are used in separating aircraft laterally — three to 20 or more miles, again depending on size of the aircraft and its distance from the RADAR antenna. I even recall during my Air Force days that the Lockheed C5A Galaxy transport (at the time the largest aircraft flying) was so large that it would return two "blips" — one for the fuselage and one for the horizontal stabilizer. The span of the horizontal stabilizer was longer than some aircraft's full wingspan.

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The other type of RADAR is secondary radar. Most Air Route Traffic Control Centers (ARTCC's or Centers) use this as their primary method of RADAR control and do not use raw RADAR. Most aircraft controlled by Centers must be assigned a transponder code that is unique to that particular aircraft at that time. The transponder is a small transmitter found in the cockpits of all airliners and most, but not all, smaller aircraft. There are 4096 possible codes with some being reserved for special flights. All transponder equipped aircraft not flying under ATC control (VFR flight) put their transponders on code "1200." This tells all RADAR controllers that the particular aircraft is flying visually using terrain features to navigate. All pilots learning to fly start with VFR rules.

Should the pilot be flying under IFR (Instrument Rules) he/she will be assigned a specific "discrete" code, such as 4352. This code is also entered into the computers that the controllers use. Many of the Air Force ATC RADAR systems use the TPX-42 secondary RADAR system. The information in the "data block" on the RADAR screen is minimal, showing the transponder code and altitude (if the aircraft is so equipped) adjacent to the primary RADAR return. The FAA ARTS systems give the controller a larger picture to work with. Depending on the ARTS system in use the controller will use some, if not all, of the following: aircraft call sign, type aircraft, altitude, ground speed, and destination. Both secondary systems will alert the controllers if the pilot dials in the codes for hijack, loss of communications, and/or emergency. This will be visually, either by blinking lights next to the RADAR screen and/or on the screen itself, and audibly by a beep or buzzer. The three codes are not "discrete" so pilots are advised to take care when changing transponder codes that they don't inadvertently place one of

these three codes in their transponder which could, of course, set off the alarms at the approach controls or centers.

When the codes appear on the RADAR screen, the controller's first responsibility is to verify its validity. Only then when it is determined the transponder code is legitimate will specific emergency procedures come into effect. Again, I must reiterate, these procedures are FOUO and I will not go into them.

Student pilots, and there are many throughout the country, must know what their responsibilities are concerning emergencies and hijackings. It's apparent that these hijackers of September 11th knew. What happens now to student flying as well as the rest of the flying world is anybody's guess. I will attempt to keep you informed. I will also attempt to answer some questions in next month's column as I return to the basics of aviation scanning. Keep listening to your scanners. ■

#### NEW/CHANGED/DELETED FREQUENCIES

##### Changed

##### CA

El Centro — NAF El Centro (NJK)

GC was 263.4, now 254.35

#### CHANGED AIRPORT IDENTIFIERS

##### AZ

Aguila — Flying Dare's Ranch Airport was 6E9, now 26AZ

##### VA

Fort Monroe — Walker Army Heliport was FYT, now VG35

Keysville Airport was W85, now VG36

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				WPEZ	Macon, GA	93.7	WMGB
				WMGB	Montezuma, GA	95.1	WEGF
				KFIF	Soda Springs, ID	100.1	KFIS
				WXTW	Auburn, IN	102.3	WEJE
				KVJZ	Ankeny, IA	106.3	KLYF
				KKNL	New London, IA	97.3	New
				KBEB-FM	Rayne, LA	106.7	KLTW-FM
				WCLZ	Brunswick, ME	98.9	WTPN
				WJJB-FM	Topsham, ME	95.5	WCLZ
				WQSR	Baltimore, MD	102.7	WXYV
				WXVY	Catonsville, MD	105.7	WQSR
				WKMZ	Williamsport, MD	95.9	WLTF
				WMUT	Grenada, MS	101.3	New
				KBUD	Sardis, MS	102.1	New
				KFLL	Great Falls, MT	100.3	New
				KBRLR-FM	Blair, NE	97.3	New
				KKYY	Blair, NE	101.5	KISP
				WMID-FM	Cape May, NJ	102.3	WSAX
				KXBL	Henryetta, OK	99.5	KCKI
				KKRI	Pocola, OK	88.1	New
				KFIS	Tillamook, OR	104.1	KJUN
				WCRG	Williamsport, PA	90.7	New
				KNFX-FM	Bryan, TX	99.5	KBMA
				KCOL-FM	Groves, TX	92.5	KTFA
				KMJR	Portland, TX	105.5	KRAD
				KMMG	Pearsall, TX	104.1	New
				KQVT	Victoria, TX	92.3	KVLT
				KPEB	Huntsville, UT	103.1	New
				WKSK-FM	South Hill, VA	98.9	WSHV-FM
				KYWL	Spokane, WA	103.9	KWHK
				WCMX-FM	Clarksburg, WV	92.7	WVHF-FM
				WLTF	Martinsburg, WV	97.5	WKMZ

Changes							
New Call	Location	Freq.	Old Call				
WQAH	Priceville, AL	1310	WJRA				
KDBV	Salinas, CA	980	KCTY				
WREY	Mulberry, FL	780	WPPD				
WZQZ	Trion, GA	1180	WSAF				
KBNZ	Honolulu, HI	1170	KZEZ				
KRUD	Honolulu, HI	1130	New				
WOAM	Peoria, IL	1350	WTAZ				
KYEA	Monroe, LA	1680	KRJO				
WEMG	Camden, NJ	1310	WSSJ				
WWIT	Canton, NC	970	WBCG				
KLIS	Holdenville, OK	1370	KCNB				
KMUR	Pryor, OK	1570	KMYZ				
WURD	Philadelphia, PA	900	WEMG				
WSHV	South Hill, VA	1370	WJWS				
WQAH-FM	Addison, AL	105.7	WYAM-FM				
KFLI	Des Arc, AR	104.7	New				
KCJF	Earle, AR	103.9	New				
KKDU	El Dorado, AR	88.9	New				
KHDV	King City, CA	93.9	KZSL				
KEBV	Salinas, CA	97.9	KHMZ				
KMJV	Soledad, CA	106.3	KHNZ				
KWCA	Weaverville, CA	101.1	New				
WTMP-FM	Dade City, FL	96.1	WMGG-FM				
WINT	Sebastian, FL	95.9	WBKM				

EAS was a good judgment call, even at the local/civil EAS levels. We truly believe using EAS would have resulted in greater anxiety and uncertainty — exactly what we did *not* need on Tuesday (September 11). When the threat is not quantified, what do you tell people to do to protect themselves? The answer is that sometimes a warning can make things worse. Based on what I know at this point, that would have been the case on Tuesday.”

Rudman cited the immediate response of the broadcast media covering events as they unfolded; “Everyone in fact was alerted to the rapidly changing situation and rapidly became glued to a radio or TV.” The advisory committee has been looking at ways to build on the EAS infrastructure to create an advanced warning system for those who need it in silent hazards to life, health, and safety that do not announce themselves.

### Satellite Radio Update

XM has officially launched their satellite digital radio service in **Dallas, Texas, and San Diego, California**. XM Satellite Radio offers 100 channels of music, news, sports, and talk, some commercial-free. XM is a subscription service, charging **\$9.99 per month**. XM’s only competitor, **Sirius**, plans to launch its service shortly at **\$12.95 per month** promising more commercial-free broadcasts. The success of both Sirius and XM hinges on partnerships with the major automakers. General Motors plans to have XM receivers available as a factory-installed option in 2002 vehicles. Sirius has teamed up with Daimler

Chrysler and Ford to offer receivers beginning in the 2003 model year. The monthly subscription fee would become invisible by including it in the automobile financing or lease. Satellite-ready receivers are already appearing on electronics store shelves, but beware that it just means the receiver has a satellite input. A separate decoder will be required to receive satellite digital radio broadcasts. Visit [www.siriusradio.com](http://www.siriusradio.com) and [www.xmradio.com](http://www.xmradio.com) for more information.

### QSL Information

**1060 KYW Philadelphia, Pennsylvania**, received station QSL card in 30 days for reception report and SASE, signed by the chief engineer. Address: 101 S. Independence Mall East, Philadelphia, PA 19106. (Harrington, PA)

**1130 KWKH Shreveport, Louisiana**, received station letter in 28 days for reception report and SASE, signed Mr. Kester, Assistant Engineer. Address: 6341 Westport Ave., Shreveport, LA 71129. (Harrington, PA)

**1290 CJBK London, Ontario**, a QSL card in 45 days signed Jeff Guy, VP of Engineering. Address: 743 Wellington Rd., South London, Ontario N6C 4R5. (Harrington, PA)

**1420 WCOJ Coatesville, Pennsylvania**, a QSL card in 10 days signed Chuck Harrington, volunteer QSL manager for



WCOJ. An SASE is required. Address: P.O. Box 56, Westtown, PA 19395. (Harrington, PA)

**1700 WEUV Huntsville, Alabama**, verification letter on WEUP stationary and WEUP sticker in 15 days, says they are 100% simulcast with WEUP 1600 and WEUV call letters are only used at the top of the hour, signed Mark Goodwin. Address: 2609 Jordan Lane NW, Huntsville, AL 35816. (Griffith, CO)

## Broadcast Loggings

After days of continuous crisis coverage, Don Hallenbeck in Maine was looking for some relief and discovered **Radio Disney**. "I got tired of hearing the constant repeat of the news about the disasters in Washington, DC, Pennsylvania, and NYC, so I began to surf the AM dial and I came across 1560 AM, Radio Disney (WQEW New York). I copy the station from about 6 p.m. to about 6:30 a.m. on a Sangean ATS-818CS. I enjoy the music. We here in Maine have no Radio Disney station that I know of, but we could use one. I guess the nearest Radio Disney station to us is the one in New York."

I'm sure many parents and children appreciated the diversion from the news as well. There is a Radio Disney outlet in Boston, 1260 AM WMKI, but you might experience interference from CKHJ "Classic Country" Fredericton, New Brunswick, on the same frequency.

Auroral absorption events due to solar activity produced some

unusual reception conditions for DXers across the U.S. This month's selected logs tell the story. All times are UTC.

**555 ZIZ** Basseterre, St. Kitts & Nevis, at 0135 good with an ad for Community Festival 2001. Calypso and Soca music, and at 0928 "World Update from the BBC in London?" then national anthem and sign-on announcement. (Conti, ME)

**567 KGUM** Agana, Guam, at 1359 after logging KTWG, I checked 567 and I heard some network commercials and "You are tuned to KGUM, Agana, Guam," before being lost behind JOIK. Conditions affected by solar storm, much different than in the past few days. (Martin, OR)

**640** Pointe-Pitre, Guadeloupe, at 2357 fair at 2215 with a discussion in French not parallel RFO France 162 kHz or St. Pierre 1375 kHz, soon lost to Union Radio-Venezuela, and at 0900 in French with Radio Nacional ID and Salsa music, then news, Radio Guadeloupe IDs, and Caribbean music. It seems that they no longer carry RFO. (Conti, ME)

**720 RJR** Kingston, Jamaica, at 2330 fair with "Beyond the Headlines on RJR 94 FM" news and public affairs program over Oriente 720-Venezuela. (Conti, NH)

**760 RCN** Barranquilla, Colombia, at 2329 an RCN ID and Spanish talk about U.S. Secretary of Defense Rumsfeld, loud. (Connelly, NH)

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**770 RCN** Bogot, Colombia, at 2355 parallel 760 kHz with Spanish news interview, over/under WABC. (Connelly, NH)

**801 KTWG** Agana, Guam, at 1355 fair and alone on the channel with soft Christian music, then sign-off announcement mentioning Trans World Radio owned KTWG, operating with 10,000 watts of power, and ending with a thought for the day. I have logged this several times in the past, but never at sign-off. (Martin, OR)

**810 WGY** Schenectady, New York, at 0830 fairly good mixing and under KGO briefly with news and ID, "News every 30 minutes all night long on Radio 810 WGY." This is the first time I have ever logged WGY with KGO on! I have heard WGY with KGO off in the past. (Martin, OR)

**950 R. Popular**, Sto Domingo, Dominican Republic, at 0255 good with romantic vocals and "Noticiero Popular, las noticias de la hora," over R. Reloj-Cuba. (Conti, ME)

**1060 XEPP** Mexico at 1040 received on top of KDUS Arizona with CKMX very poor during auroral conditions, heard with romantic ballads and light jazz, announcements every 20 or so minutes including many "Radio Educacion" IDs. I never thought I would ever get a copy on this. It's easier for me to hear a 2 kW Aussie than a 50 kW Mexico City station! Really nice to hear this station. (Martin, OR)

**1160 VSB3** Hamilton, Bermuda, at 2316 parallel 5975 kHz with BBC news about Afghanistan, excellent over an unidentified 1160.17 kHz Latin American growler. (Connelly, NH)

**1180 R. Rebelde**, Villa Maria, Cuba, at 2346 parallel 5025 kHz with Spanish news about U.S. military action in Afghanistan, loud and dominant over Canaries-1179 kHz het. (Connelly, NH)

**1500 KUMU** Honolulu, Hawaii, at 0855 fair above KSJX with ID, "Koo Moo AM 1500" into Jerry Vale nostalgia. (Martin, OR)

**1530 WUPR** Utuado, Puerto Rico, at 2335 fair with a National Guard PSA

from the Broadcasters Association of Puerto Rico, talk and romantic ballads. (Conti, ME)

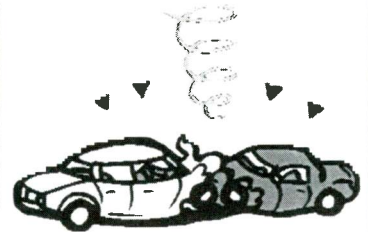
**1550 RASD** Clandestine, Tindouf, Algeria, at 2236 parallel 7460 kHz with rabble-raising type speech, then a much calmer in-studio Arabic announcer, through phased WNTN daytimer. (Connelly, MA)

**1680 KYEA** Monroe, Louisiana, at 0630 with the Black Gospel program "Rejoice," good on top with KAVT phased, some WTIR interference at times. Per my phone call a couple months

back to the station, they were due to sign on anytime with Black Gospel according to the GM. (Martin, OR)

Best wishes to radio talk show host Rush Limbaugh who revealed to his listeners that he had suffered almost total hearing loss. Rush told listeners that if medication doesn't help, then he would be left only with the risky option of cochlear implant surgery to restore hearing. Again, let's hope for the best. Thanks to Mark Connelly, Patrick Griffith, Don Hallenbeck, Charles Harrington, Patrick Martin, and Paul Walker. 73 and good DX! ■

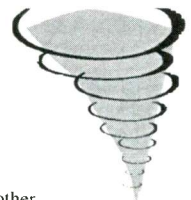
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### World Terrorism And Our Radio Monitoring Ethics

While our magazine's publication date is the first month of the New Year, the actual time that I am writing this column is one month after the terrible events of September 11th. At this point in time people are beginning to recover from the shock of that infamous day. However, it is very apparent that the world did change, and the effects of that change are being felt in every aspect of our lives.

Radio monitoring, particularly utility monitoring, is not isolated from the events that have been taking place. Plain and simply, we are at war with terrorism, and this has some real implications for how we conduct ourselves.

What this column will be looking at are some of the legal and ethical issues surrounding the monitoring of non-broadcast radio communications on the frequencies reviewed in this column. A great deal of the traffic that is heard, logged, and reported here is military and intelligence related. Likewise the communications taking place between commercial airplane pilots and ground control are also logged and reported here.

Given the seriousness of the situation, many of our previous practices must be re-examined in view of new security requirements. However, in saying that, it is equally important that we maintain the basic elements of an open society that characterizes one that is free and democratic.

There are many examples from the history of different political regimes on both the right and the left that have suppressed or prohibited the unsupervised or unrestricted monitoring of radio frequencies. Any of us can remember different periods when broadcast signal were blocked or jammed by different governments in order to keep "undesirable" information from being heard by their citizens.

However, the traffic generated by the transmissions of utility service radio stations is different. They are, by law and convention, private information. By what amounts to a "gentleman's agreement" that has been codified in law, we can listen to these transmissions. What the law is very clear about our monitoring of those transmissions is that we cannot divulge the contents to anyone, nor use the information for our own personal benefit.

This compromise between the complete (and unenforceable) outlawing of general coverage receivers, and the need for a sense of privacy when one is making a point-to-point transmission, has worked for decades. Given the alternatives, these laws are a reasonable restriction upon our democratic rights.

The reason I say that they are a reasonable restriction is that current laws allow us listen to what is taking place in the publicly owned airwaves. This ability to monitor and listen in to utility service transmissions is entirely appropriate in an open society. In the same way that we can listen in to a private conversation in a public place, or take pictures of people found there, so it is that we also have the right to monitor radio frequencies because they are a public place as well.

Likewise, we must never forget that government and armed forces (including all security services) are accountable to us because we pay for their existence through voluntary taxes. The

limiting factor here is a condition called "national security." That is something that I want to address in this column, because while we are at war, it is a very peculiar one.

The fact of the matter here is that the ultimate decision regarding what level of monitoring activity we perform will be determined by the events that take place during this period of time. Given the instability of the times that we live in, my words may become ironic at any time as situations change.

Still, we need to discuss these issues now, and look at the situation seriously and cautiously. Can our monitoring logs be misused? Should we voluntarily restrict which services we log and report in publication? Or, should we simply continue on as we have, using the existing legislation on radio monitoring as our guide?

What I do not want to see is some hysterical response on the part of an ill-informed government official or citizen who sees threats to national security where none exist due to their lack of sophistication and knowledge about our radio monitoring interests. There are precedents for such actions taking place that go back to the earliest days of commercial radio, and I will outline how those events came to shape our current laws governing radio monitoring of utility services in future columns.

I am sorry to have to be so serious when I have tried in the past to make the column informative and entertaining. However, as we know, the world changed — possibly forever — on a bright and sunny Tuesday morning at about a quarter to 9 in the morning in New York City and DC.

Now we have to do something about that change in order to keep from being swept up in it.

### Radio Monitoring And The Law

I have to start off this section by saying that I am not a lawyer, nor have I consulted a lawyer about the points of law raised here. What I intend to do here is outline the legal framework that I believe is the one that current radio monitoring practice is governed by. Likewise I will cover the law as it applies in the United States of America and Canada. Readers in other countries must consult their own laws covering this subject.

Remember, that given the schedule of publication for this column, the situation may change rapidly. Therefore you must undertake to consult current laws, rules, and regulations, rather than depending upon what I have written here as being the ultimate authority in radio monitoring practice.

In the United States the laws governing radio monitoring are covered in **Public Law No. 416 — The Communications Act of 1934** (47 U.S.C. Section 151 ñ 714), title VI, section 605. In Canada the laws governing radio monitoring are the General Radio Regulations Part I, section 9 and General Radio Regulations Part II, section 32, with additional information

The law, be it in the United States or Canada, basically says this; you cannot divulge the content of a non-broadcast radio transmission that you have monitored to another person by

any means, except under special circumstances outlined in those laws.

At this point I strongly suggest that each of you who is engaged in the monitoring of non-broadcast radio transmissions get a copy of the laws that apply to you, and read them over. Yes, they are written in legalese, but they are not that obscure in their meaning.

What is very clear is that currently it is *not illegal* to monitor non-broadcast radio transmissions. However, it is illegal to divulge the content of that transmission. In fact, the title of the Communications Act of 1934 section 605 is "Unauthorized Publication of Communications."

The Federal Communications Commission (FCC) produced a very good current (1999) document that clarifies what section 605 means. It is called "Interception and Divulgence of Radio Communications" and it is part of their "Fact Sheet" series.

What is clearly stated in that document is that "... the Communications Act generally does not prohibit the mere interception of radio communications ...". However, what section 605 does prohibit is the publication or use of intercepted information for your own or someone else's benefit.

The example that is given by the FCC in the document to illustrate how someone could be in violation of section 605 would be the case of a commercial tow truck company listening to emergency service reports on a scanner, and then sending a tow truck to the site of an accident in order to make money.

Still, there are concerns about privacy and security, and the FCC makes it clear that other laws — be they state or federal statutes, may supercede the provisions of section 605. The primary example given there are the laws specifically prohibiting the monitoring of cellular phones or descrambling pay per view satellite transmissions.

**In Canada** the law is much more forthright on the matter of radio monitoring. It says in **Section 9(2) of the General Radio Regulations, Part I**:

"Except as prescribed, no person shall intercept and make use of, or intercept and divulge, a radio communications, except as permitted by the originator thereof."

In the Canadian case, the regulations are more black and white, reflecting the fundamental differences between the political and legal cultures of the two countries. The United States Constitution does place citizen's needs ahead of those of the government, while the Canadian system reflects the subservient role of the citizen to the requirement of an ordered society.

However, for the radio monitor in the **United States**, there is a very important law contained in the Communications Act of 1934 that must be understood as it is directly related to current events. **Section 606**, which is entitled "**War Emergency-Powers of the President**," gives the President very important powers over radio communications. Specifically, in part C of Section 606, it says:

"Upon proclamation by the President that there exists war or a threat of war or a state of public peril or disaster or other national emergency, or in order to preserve the neutrality of the United States, the President may suspend or amend, for such time as he may see fit, the rules and regulations applicable to any or all stations within the jurisdiction of the United States as prescribed by the Commission ..."

The section goes on to say that the President can order any radio station closed, and have their equipment confiscated (hav-

ing been compensated for the costs) if they are found to have interfered in some way with national security and defense.

What's important here is what constitutes the definition of the term "station." Under Section 3 part K of the Communications Act of 1934, it offers this definition:

"Radio station" or "station" means a station equipped to engage in radio communications or radio transmission of energy.

The Canadian regulations are much more specific, recognizing the existence of commercial receiving stations under Section 65(1) of the General Radio Regulations. More importantly, the interception of signals intended for those receiving stations are only allowed with written permission from the transmitting station, and that permission is registered directly with the government.

So, given the fact that President George W. Bush of the United States of America has declared a state of war against terrorism, it *appears* that the provisions of Section 606 are now in effect. Likewise, since Canada has also chosen to stand beside the United States in this war, then section 9 of the General Radio Act Part I is now in full force.

Again, what I am doing here is not giving you a legal interpretation of the laws as they now stand. All I wish to do is remind you of what the laws are, particularly in view of the global situation. At the time of writing, we are at war, and everything has changed, including, it appears, the way that we will be doing our radio monitoring.

## Radio Logs And This Column

So how will the declared state of war affect the way that logs are reported in the column?

As is outlined in the Communications Act of 1934, and as has been recently clarified by the FCC, radio monitoring is not illegal unless specifically prohibited by law. What the law does prohibit is the use of the information contained in a transmission for personal benefit, or the benefit of another persons.

Likewise during this time of declared war, the President of the United States, or his designated agent, or the FCC itself, can change the laws governing radio communications in order to give preference to national security.

Again, these are only my views based upon my reading of the law, and the actual interpretations should be made by a legal specialist, or determined through the judgment of a court of law. Likewise, statements made by the President, or his agents or government officials, may clarify what our actual radio monitoring practices may be.

In view of my reading and personal interpretation of the law, the publication of reader's use monitoring logs will continue, but with certain common sense restrictions. As the Communications Act says, the information contained in the transmissions, rather than the monitoring of transmissions, is what is at issue, particularly if that information can benefit someone.

Obviously the question that must then be asked is; what specific information heard during radio monitoring of utility stations can be of benefit to the declared enemies of the United States of America?

The obvious answer is that we cannot know. That is the dilemma that we face in this new war with a new type of enemy. That is what makes this entire situation so difficult for all of us — the unknowingness of it all.

So upon first examination we have two extremes of response that we can take in our radio monitoring practices. One is to



eliminate all possibilities of the terrorists gaining information by eliminating all sources of this, which has been seriously suggested. The other is to just go on as we always have, because the enemy is very capable of gathering their own information without relying upon the scraps that we contribute through our hobby.

I reject both of these approaches because they are so extreme. What I suggest we do is the following.

## Ethical Radio Monitoring In Wartime

In the United States, the monitoring of utility stations is not currently illegal. Until such time as the status of monitoring activity changes under law, this column will continue to collect and publish radio-monitoring logs supplied by the readers.

While the monitoring of utility stations is legal, there are restrictions on how the information that is heard while monitoring is used. If that information is used for a personal benefit, it is being used illegally. As certain information can be of benefit to the designated enemy of this current war, then this is a matter of concern.

Likewise, as it is impossible to determine if certain information is of benefit or not, then the best choice is to not publish any specific content information. What this means for this column is that while I will continue to publish user's logs, they will no longer contain any information about the content of the transmission heard.

What the column will continue to do is follow its original mission, which is to provide "news, information, and events in the utility radio service . . ." as stated on the masthead of the column. Readers will continue to be encouraged to monitor utility stations, including military and security services.

If you are submitting a monitoring log for publication, please follow this format:

Frequency in Kilohertz  
Station ID (Callsign)  
Location of station at time of transmission  
Brief summary of type of traffic and mode of transmission  
Time of transmission in universal time  
Personal comments  
Name in short form

So an example of that would be:

**10000:** WWV, Fort Collins, CO, Time Signal/ AM at 2000Z, heavy fading (JC)

If you do not know the callsign:

5555: UNID, off Atlantic Coast, Coast Guard/ USB at 0000Z, rescue in progress (JC)

Likewise, if you simply don't know:

5555: UNID, UNID, USB at 0000Z, distress call (JC)

You can also report information that is broadcast, such as in the following:

5555: UNID, UNID, CW at 0000Z, sending "CQ de ?"/ Heavy fading made copy impossible (JC)

It is important to keep in mind what function these logs are supposed to provide for the readers of this column. Plain and simply, they are presented to assist you in finding, and listening to, utility radio stations on your own equipment, rather than reporting the content of the transmissions themselves.

From this column on I am going to be reading over the submitted logs more carefully in order to ensure that this rule of content is followed. I hate to call it censorship, but I will remove anything from a log that I feel reveals the contents of a transmission. Likewise, if I feel that a log is simply too sensitive and may violate security of our fighting forces, then it will not be published.

In this regards, I want to hear from you, the readers of this column. What is your opinion on this very important matter? You've read my opinions and observations, now what do you think? It is your hobby, but it is also your country. What is more important; your ability to monitor your radio or national security? I want to hear from you — now!

## This Month's Logs

Frankly there were few letters from readers this month as everyone was recovering from the shock of the events of September 11th. So we will go directly to the reader's logs.

Please read over the logs carefully, as I have formatted them to conform to the criteria that I have outlined above. They should serve as a good template for your future submissions. As you can see, there is still a lot of excellent information contained in them.

Again, when you are submitting logs, do so in the format shown in the first template log placed at the beginning of the list. I have been spending a lot of time re-formatting submissions in order to ensure that as many logs as possible can be placed on these pages. Please help me by taking a little extra time to format them as I have requested.

As usual, we have a good group of people submitting logs this month, even as the events have drawn people's attention away from many of their normal activities. Thank you one and all for your good work.

Note: All frequencies in kilohertz (kHz)

**00000:** STATION, Anytown, USA, summary of traffic heard in MODE at 0000 Z (Z), personal comments here (JC)  
**196:** DIW, NDB Dixon NC 0336 CW w/id. Listed as 198 kHz. (MADX)  
**212:** ESN, NDB Easton MD 0341 CW w/id. (MADX)  
**216:** CLB, Carolina Beach NDB Wilmington, NC 0347 CW w/id. (MADX)  
**237:** EZF, Shannon NDB Fredericksburg, VA 0355 CW w/ID. 25 watts. (MADX)  
**246:** IL, UNID NDB 0400 CW. No "IL" listed on this freq. (MADX)  
**248:** UL, Montreal NDB 0406 CW w/id. (MADX)  
**284:** 430 MIZEN HD LT DGPS/MSK//100BPS Stn ref 660. Post freq realignment. (DW)  
**288.5:** 435 TORY ISLAND LT DGPS/MSK//100BPS Stn ref 670. Post freq realignment. (DW)  
**290.5:** 447 FLAMBOROUGH HD LT DGPS/MSK//100BPS Stn ref 687. Post freq realignment.(DW)  
**291:** 439 WORMLEIGHTON DGPS/MSK//100BD New stn. Ref stn 691. (DW)  
**293:** 432 LOOP HEAD DGPS/MSK//100BPS Stn ref 665. Post freq realignment. (DW)  
**297.5:** 442 POINT LYNAS LT DGPS/MSK//100BPS Stn ref 682. Post freq realignment. (DW)  
**299.5:** 448 NORTH FORELAND LT DGPS/MSK//100BPS Stn ref 688. Post freq realignment. (DW)  
**307.5:** 440 ST CATHERINES PT LT DGPS/MSK//100BPS post freq realignment. Ref stn 680 (DW)  
**309.5:** 449 NASH PT LT DGPS/MSK//100BPS Post freq realignment. Ref stn 689. Beacon almanac - adj stns 441/442/430 (DW)  
**414:** BC: Baie Comeau NDB Canada 0416 CW (MADX)

- 490:** E CORSEN SITOR/B//100/E/170 WX bdcast in FF followed by navs. (DW)
- 518:** A CORSEN SITOR/B//100/E/170 Navs (DW)
- 518:** D GRIMETON SITOR/B//100/E/170 Baltic WX (DW)
- 518:** P IJMUIDEN SITOR/B//100/E/170 nav wng (DW)
- 518:** R MONSANTO SITOR/B//100/E/170 Nav warnings. (DW)
- 518:** X VALENCIA SITOR/B//100/E/170 Navs (new dgps freq in E Spain), WX fct, further navs (DW)
- 518:** W VALENTIA SITOR/B//100/E/170 WX forecasts (DW)
- 518:** VBA, Canadian Coast Guard, Thunder Bay 0630 NAVTEX w/broadcast. [P]. (MADX)
- 710:** UNID, Unknown loc. 18.12 ITA2 104/170 Sends continuous RYRYs for a couple of hours then shuts down. (PT)
- 2187.5:** UNID, GMDSS ALERT CHANNEL DSC//100/E/170 8 packets in 1hr20 mins. (DW)
- 2250:** OWK DAF HQ VEDBAEK MIL.STD 188-141A ALE on USB. Cng OWF/Skrydstrup (DW)
- 2250:** OWF DAF SKRYDSTRUP MIL.STD 188-141A ALE on USB. Responding to OWK (DW)
- 2250:** OWE DANISH AF KARUP MIL.STD 188-141A ALE on USB. Responding to OWP/DAF ?loc (DW)
- 2250:** OWF DANISH AF SKRYDSTRUP MIL.STD 188-141A ALE on USB. Cng OWC/ ?loc (DW)
- 2250:** OWP DANISH AF ?LOCMIL.STD 188-141A ALE on USB. Cng OWE/DAF Karup (DW)
- 2582:** UNID, Bermuda harbor radio marine info and WX broadcast in USB 0435-45 (RW)
- 3345:** MVNHF424, UNID USACE 0221 MIL-STD 188-141A/USB w/sounding call. (MADX)
- 4083:** UNID, N. American user 0307 VFT BR6028 7x75/170. Also on 5344 and 8019. (MADX)
- 4232:** FUF, FN Ft de France 0342 RTTY 75/850 RY/ID test tape (RH2)
- 4235:** NMF, USCG Boston 0346 fax 120/576 Looked like Satpix (RH2)
- 4273:** FUO12: French Navy, Toulon 0424 BAUDOT 75/710 w/test tape. (MADX)
- 4278.7:** UNID, UNID, 0350 RTTY 100/850 Online crypto! Genuine Baudot (RH2)
- 4295:** HWN?, FN Paris? 0358 RTTY 75/850 Crypto (RH2)
- 4354:** Prefectura Naval Mar del Plata, Argentina, messages of position ship, report position to base, USB, 2245Z (EW)
- 4445:** S85 SWEDISH EMB ?LOC MIL.STD 188-141A ALE on USB. Cng ?/UNID (DW)
- 4610:** GFA22, Bracknell METEO 0408 fax 120/576 Poor WX chart! Wasn't Bracknell renamed?? (RH2)
- 4650:** UNID, 0226 CODAR Seasonde Radar System (MADX)
- 4742:** ARCHITECT, Upavon, England 20.30 USB YL with selcal check, AJLM, to British a/c call sounds like Grand Central 5 (PT)
- 4812:** UNID, UNID 0425 RTTY 150/850 Unable decode (RH2)
- 4841:** OWK DANISH AF HQ VEDBAEK MIL.STD 188-141A ALE on USB. Cng ?/UNID (DW)
- 5000:** UNID, loc unknown 18.50 ITA2 100/850 RYRYRYRY... for about half an hour then shuts down. (PT)
- 5097:** CFH, CF Halifax 0431 RTTY 75/850 ID string. (RH2)
- 5121:** UNID RUSSIAN MIL CW Tfc in offline encrypt. (DW)
- 5154:** C CISEN MOSCOW CW Single letter [C] hf beacon. (DW)
- 5159:** 4XZ IN HAIFA CW Marker "vuv de 4XZ == " (DW)
- 5159:** 4XZ IN HAIFA CW Marker "vuv de 4XZ == ". Very weak. (DW)
- 5300:** S88 SWEDISH EMB BUENOS AIRES MIL.STD 188-141A ALE on USB. Sounding. (DW)
- 5394.5:** S88 SWEDISH EMB BUENOS AIRES MIL.STD 188-141A ALE on USB. Sounding. (DW)
- 5405:** Appears to transmit in parallel sometimes. Shuts down before any chance to find mode, but sounds like ITA2. (PT)
- 5419:** V02, Atencion Numbers Station 0229 AM YL/SS/5FGs weak and already in progress. (MADX)
- 5429:** S85 SWEDISH EMB ?LOC MIL.STD 188-141A ALE on USB. Sounding. (DW)
- 5696:** CAMSLANT, 0525 USB wkg 2114, USCG HU-25A (ATC Mobile). Group Mobile requests that you drop a DMB (Data Marker Buoy) between S and O tower." (MADX)
- 5708:** REACH 511R, UNID Pope AFBC-141 0429 USB wkg LAJES w/ALE-originated pp w/ROTA AMC Terminal. MIL-STD 188-141A id's, PLA (Lajes) and 200 (Reach 511R). (MADX)
- 5711:** HHS, Health and Human Services 0235 MIL-STD 188-141A w/sounding call. Followed by AAT3BFMARS, US Army MARS Delaware w/sounding call. (MADX)
- 5732:** TRC, US Customs Service (poss Service Center/DAICC) 0426 SELSCAN + MIL-STD 188-141A/USB. Would first signal using SELSCAN then sounded using MIL-STD 188-141A. Stepped up to 7527 and 8912 as well. (MADX)
- 5920:** CFH, CANFORCE Halifax 1519 BAUDOT 75/810 w/zkr list. (MADX)
- 6340.5:** NMF, USCG COMSTA Boston 0300 FAX 120/576 w/broadcast schedule. (MADX)
- 6340.5:** NMF, USCG Boston 0438 fax 120/576 Poor chart (RH2)
- 6348:** FUE, French Navy Brest 0308 BAUDOT 150/850 w/test tape. (MADX)
- 6358.5:** PBC, Royal Dutch Navy, Goeree 0314 BAUDOT 75/828 w/CARB. (MADX)
- 6360:** KFS, San Francisco R. 0447 ARQ Marker (RH2)
- 6415:** 7TF, Boufarik Radio 0321 CW w/call tape. (MADX)
- 6458.5:** AFRTS Feeder 0324 USB w/discussion of roller coasters. (MADX)
- 6496.4:** CFH, CANFORCE Halifax 0328 FAX 120/576 w/distorted signal. (MADX)
- 6496.4:** CFH, CF Halifax 0455 RTTY 75/850 WX codes. (RH2)
- 6496.4:** CFH, CF Halifax 0510 fax 120/576 Nice chart. (RH2)
- 6532:** 007 ARINC SHANNON HF DL// on USB. Squitters. (DW)
- 6697:** MKL: RAF Kinloss 0404 USB wkg X4S w/radio checks. "Nothing heard, out." Both stations audible here. (MADX)
- 6766:** S85 SWEDISH EMB ?LOC MIL.STD 188-141A ALE on USB. Sounding. (DW)
- 6770:** SIL FBI SPRINGFIELD IL MIL.STD 188-141A ALE on USB. Cng COT CFB (DW)
- 6770:** BISB4 ROMANIAN MIL/MOI BISTRITA MIL.STD 188-141A ALE on USB. Responds to TIMB4/Timisoara (DW)
- 6770:** TIMB4 ROMANIAN MIL/MOI TIMISOARA MIL.STD 188-141A ALE on USB. Cng BISB4/Bistrita BEQ/UNID (DW)
- 6770:** UNID MIL.STD 188-141A ALE on USB. Responds to SIL. 0354 and 0639 cng SIL. (DW)
- 6770:** 9HH UNID MIL.STD 188-141A ALE on USB. Cng TMUB4/Romanian Mil/Moi Targu Mures (DW)
- 6945:** BOTB2 ROMANIAN MIL/MOI BOTOSANI MIL.STD 188-141A ALE on USB. Cng BRLB2/Brailia (DW)
- 6945:** F2LB2 ROMANIAN MIL/MOI ?LOC MIL.STD 188-141A ALE on USB. (DW)
- 6980:** S84 SWEDISH EMB WASHINGTON MIL.STD 188-141A ALE on USB. Sounding. (DW)
- 7390.5:** 90v4 UNID MIL.STD 188-141A ALE on USB. Cng 90T1 (DW)
- 7508:** ZSJ, SAN Navcomcen Silvermine 1553 fax 120/576 super chart - as usual! // 13538.0 & 18238.0 kHz (RH2)
- 7535:** THEODORE ROOSEVELT TECH CONTROL, *USS Theodore Roosevelt* CVN-71 1217 USB wkg NORFOLK SESEF w/radio checks. (MADX)
- 7595:** UNID, French Mil. 18.00 ARQ-E 72/400 Idling with alphas all night (PT)
- 7650:** PAR PARIS MIL.STD 188-141A ALE on USB. Sounding (DW)
- 7650:** PAR PARIS MIL.STD 188-141A ale on USB. Sounding. (DW)
- 7650:** TOU TOULOUSE MIL.STD 188-141A ALE on USB. Sounding. (DW)
- 7650:** TOU TOULOUSE MIL.STD 188-141A ALE on USB. Sounding regularly thru 0617z. (DW)
- 7776.5:** OST33 OOSTENDE RADIO SITOR/B//100/E/170 Tfc list. (DW)
- 7972:** S12 SWEDISH EMB BOGOTA MIL.STD 188-141A ALE on USB. Sounding (DW)
- 7972:** S93 SWEDISH EMB HAVANA MIL.STD 188-141A ALE on USB. Sounding. (DW)
- 8010:** BOT ROMANIAN MIL/MOI BOTOSANI MIL.STD 188-141A ALE on USB. Cng BUI/Bucharest (DW)



**8010:** BU1 ROMANIAN MIL/MOI BUCHAREST MIL.STD 188-141A ALE on USB. Responds to BOT/Botosani (DW)

**8020:** UNID. Ukraine?? 19.35 ITA2 50/250 KRIPTOGRAMA BURAN etc then encrypted tfc (PT)

**8025.4:** WPC PINE OAK GLADSTONE NJ CW Periodic marker after short data burst. (DW)

**8040:** GYA RN NORTHWOOD FAX//120/576/N/800 850. Noisy. (DW)

**8051.7:** UNID EGYPTIAN EMB PARIS SITOR/A//100/E170 in irs mode till 1953 then brief opchat in AA(ATU80) revert to irs for spell. Followed by long msg in AA. (DW)

**8060:** AAA UNID MIL.STD 188-141A ALE on USB. Sounding. (DW)

**8060:** AAA UNID MIL.STD 188-141A ALE on USB. Sounding (DW)

**8060:** AAA UNID MIL.STD 188-141A ALE on USB. Sounding (DW)

**8094:** FDC, French Air Force, Metz 0524 CW w/channel marker (MADX)

**8103:** 4XZ IN HAIFA CW Tfc - in Hebrew? [21wpm]. 2201 revert to marker "vzv de 4XZ ==". (DW)

**8122:** CANBERRA CONTROL, RANCOMSTA Canberra 1158 USB w/kg LAUNCESTON, Fremantle-class Patrol Boat 207 w/communications servicing. (MADX)

**8152:** UNID, station, call "relay", coordinating the cruiseheimers net in USB at 1240z. several yachts also heard. Found on [www.mouseherder.com/xapic/freq.html](http://www.mouseherder.com/xapic/freq.html). (RW)

**8188:** 9MR MN JOHOR BAHARU RTTY//50/R/850 Poor copy but tfc in Malaysian. Reverts to marker "9MR 5/21rmj mrb ry's sg's" (DW)

**8302:** UNID: Russia/Cuba? 0403 81-81 81/185 (MADX)

**8335.5:** DHJ59, German Navy Wilhelmshaven 0110 USB w/kg DRAE, Type 103B Destroyer FGS "Luetjens" (D-185) then into 3-ch VFT. (MADX)

**8420:** KHF Agana Radio, Guam, traffic CW/SITOR, 1420Z (EW)

**8420.5:** HEC18 BERN RADIO SITOR/B//100/E/170 Notice to ships re registering for Autotex. Tfc list. Reverts to chan free marker "HEC" (DW)

**8448:** Hamala Radio, Bahreim, ID + traffic CW, 1428Z (EW)

**8453:** FUG, French Navy Le Regine 0544 BAUDOT 75/788 w/marker tape. (MADX)

**8478.5:** FUF, French Navy, Fort de France 0547 BAUDOT 75/800 w/test tape. (MADX)

**8496:** CLA, 0550 CW w/channel marker. (MADX)

**8503.9:** NMG, USCG COMSTA New Orleans 1200 FAX 120/576 w/0600z Tropical Surface Analysis chart. (MADX)

**8573:** CLA, 0557 CW w/channel marker. (MADX)

**8612:** KPH, Globe Wireless San Francisco 0603 CW/ARQ Free marker. (MADX)

**8640.3:** MGJ, Royal Navy Faslane 0612 4ch-VFT. CARB on 8642.085 in BAUDOT 75/340. (MADX)

**8686:** IRM, Rome Radio 0618 CW w/channel marker. (MADX)

**8903:** Libreville, Gabon, "call to BATA - Guinea Equatorial", USB, 2220Z (EW)

**8942:** 007 ARINC SHANNON HF DL//on USB. Squitters. 0926z uplink logon confirm to ICAO 17070155 as Air ID 21 (DW)

**8983:** CAMSLANT 1929 USB w/kg COAST GUARD 217, UNID (prob USCG Auxiliary Aircraft). (MADX)

**8983:** USCGC *Sweetbrier* 0203 USB w/kg CAMSPAC for datalink frequency. CAMSPAC directs *Sweetbrier* to 11167.3 kHz USCGC *Sweetbrier* was decommissioned in late August, but may be in use due to current security environment. (MADX)

**8983:** CAMSLANT, 1433 USB w/kg RESCUE 1719, USCG HC-130H7. (MADX)

**8983:** CAMSPAC, 0440 USB w/kg RESCUE 1703, HC-130H7 (CGAS Barbers Point) "D14 is on the phone. They say that you did not report to the RCC when you left." (MADX)

**8992:** DEARTAG with p/p via Andrews AFB to unknown party (QSYed from 11175). DEARTAG transmitted message in USB from 0021-0029Z (CG).

**8992:** REACH 8053 called by Andrews AFB. USB at 2137Z (CG).

**8992:** Offutt AFB transmitting message (CG).

**8992:** Andrews AFB transmitting message USB at 2148Z with heavy audio echo (CG).

**8992:** REACH 8053 called by Andrews AFB several times with no joy. USB from 2150-2153Z (CG).

**11175:** JW370 with p/p to unknown party via Offutt AFB, reporting departure time, ETA. USB from 2139-2146Z (CG).

**8992:** OTIS 10 with p/p to OTIS BASE via Puerto Rico (QSYed here from 11175). USB from 2252-2258Z (CG).

**8992:** THULE 0637 USB w/28-character EAM (VYGBNW ANDREWS' operator was VERY unprofessional throughout the xmsn. ANDREWS was parallel on 8992 and 6712. No other freqs noted. (MADX)

**9007:** HALIFAX MILITARY 1358 USB w/kg UNID w/WX actuals. (MADX)

**9044.9:** 5YE NAIROBI MET FAX//180/576/N/800 Blurred chart for Europe, N and central Africa. (DW)

**9050:** PAR UNID PARIS ? MIL.STD 188-141A ALE on USB. Sounding. (DW)

**9050:** TOU UNID TOULOUSE ? MIL.STD 188-141A ALE on USB. Sounding. (DW)

**9070:** S93 SWEDISH EMB HAVANA MIL.STD 188-141A ALE on USB. Sounding. (DW)

**10000:** 186, UNID (PRC MFA?) 1901 MIL.STD 188-141A/USB w/sounding call. Half-hour sounding schedule. (MADX)

**10024:** LIMA RADIO, 0455 USB w/kg UNID a/c. (MADX)

**10150:** S00 MFA STOCKHOLM MIL.STD 188-141A ALE on USB. Sounding. Also 1753z (DW)

**10151.5:** T159 US MIL ?LOC MIL.STD 188-141A ALE on USB. Sounding regularly thru 0704z (DW)

**10200:** SIL FBI SPRINGFIELD IL MIL.STD 188-141A ALE on USB. ClnG COT/? (DW)

**10200:** SIL FBI SPRINGFIELD IL MIL.STD 188-141A ALE on USB. ClnG COT. Also at 0536. (DW)

**10200:** COT UNID MIL.STD 188-141A ALE on USB. Responding to SIL/FBI Springfield. (DW)

**10200:** COT UNID MIL.STD 188-141A ALE on USB. Sounding. Also 0517. 0527. 0536 clnG SIL. (DW)

**10235:** T159 UNID MIL.STD 188-141A on USB. Sounding. (DW)

**10235:** T159 US MIL ?LOC MIL.STD 188-141A ALE on USB. Sounding regularly thru 0705z (DW)

**10248:** 8BY, French Intelligence (Enigma M16) 0448 CW w/call tape. (MADX)

**10261.5:** UNID. UNID LOC PICC//On stand-by until offair 0945z (DW)

**10335:** KIN ANGOLAN EMB KINSHASA MIL.STD 188-141A ALE on USB. Sounding (DW)

**10375:** BU3 ROMANIAN MIL/MOI BUCHAREST MIL.STD 188-141A ALE on USB. Responds to TIM/Timisoara. Short exchange of s/stone psk modem. (DW)

**10375:** TIM ROMANIAN MIL/MOI TIMISOARA MIL.STD 188-141A ALE on USB. ClnG BU3/Bucharest, Short exchange of psk s/stone modem (DW)

**10518:** S94 SWEDISH EMB GUATEMALA CITY MIL.STD 188-141A ALE on USB. Sounding (DW)

**10536:** UNID, station sounding like fax on at 2100z. assumed to be Halifax which is scheduled here with weather, along with 4271. 6496.4 which were not heard (RW)

**10566:** M8, Cut numbers station 1304 CW in tfc. (MADX)

**10581:** S94 SWEDISH EMB, GUATEMALA CITY MIL.STD 188-141A ALE on USB. Sounding (DW)

**10581:** S12 SWEDISH EMB, BOGOTA MIL.STD 188-141A ALE on USB. Sounding. 0128 responds to Washington/S84. 0246 sounding (DW)

**10581:** S93 SWEDISH EMB HAVANA MIL.STD 188-141A ALE on USB. Sounding (DW)

**10581:** S84 SWEDISH EMB WASHINGTON MIL.STD 188-141A ALE on USB. ClnG Bogota/S12 (DW)

**10587:** S84 SWEDISH EMB WASHINGTON MIL.STD 188-141A ALE on USB. (DW)

**10600:** PAR PARIS MIL.STD 188-141A ALE on USB. Sounding (DW)

**10600:** TOU TOULOUSE MIL.STD 188-141A ALE on USB. Sounding, also at 0728z (DW)

**11045:** S53 SWEDISH EMB AMMAN MIL.STD 188-141A ALE on USB. Sounding (DW)

**11110.5:** RFLI, Fort de France, Martinique 10.30 ARQ-E 192/400 CdeV to self, no cct ID seen (PT)

**11125:** HZN, Jeddah Meteo 0439 BAUDOT 100/776 w/WX tfc. (MADX)

11125: HZN, Jeddah Meteo 1642 RTTY 100/850 WXEE then AAXX codes (RH2)

11157: 94 SWEDISH EMB GUATEMALA CITY MIL.STD 188-141A ALE on USB. Sounding. (DW)

11175: KING 21 requesting radio check, answered by Andrews AFB and Offutt AFB in USB at 0041Z (CG).

11175: REACH 173T with p/p via Puerto Rico requesting WX info for San Juan in USB from 0049-0055 (CG).

11175: KING 31 with p/p via Andrews AFB with unknown party. KING 31 reported departure from Arizona with take-off and expected return time in USB from 0056-0059 (CG).

11175: REACH 173T with p/p via Puerto Rico with unknown party, informing the party about shutdown of #2 engine and diversion to Puerto Rico. USB from 0106-0110 (CG).

11175: Andrews AFB calling DEARTAG with no joy in USB at 0111Z (CG).

11175: REACH 221 requesting radio check, answered by Andrews AFB in USB at 0111Z (CG).

11175: REACH 6002 requesting radio check, answered by Puerto Rico in USB at 0113 (CG).

11175: REACH 11 with p/p to METRO via Andrews AFB. Needed WX information for 2355. USB at 2304Z (CG).

11175: REACH 251Y with p/p via Puerto Rico with unknown party concerning some type of mechanical problem with the aircraft. USB at 0035Z (CG).

11175: REACH 173T (a C130) with p/p via Puerto Rico to Puerto Rico Nat'l Guard command post. USB from 0037-0049Z (CG).

11175: RANGER 33 calling Andrews AFB for radio check in USB at 2310Z (CG).

11175: JW614 with p/p to METRO via Andrews AFB requesting WX info for 0730. Andrews had to relay due to poor copy. USB from 2312-2322 (CG).

11175: ASCOT 71 requesting radio check, answered by Andrews AFB in USB at 2257Z (CG).

11175: OVERLORD with p/p to Offutt Metro via Andrews AFB, requesting WX info for a 2230Z landing. USB from 2114-2121Z (CG).

11175: REACH 611 with p/p via Andrews AFB, a personal call in USB from 2123-2129 (CG).

11175: Andrews AFB calling REACH V9A for radio check with no joy. HOB0 77 answered Andrews but Andrews did not respond. USB at 2352Z (CG).

11175: REACH 6014 with p/p to "McGuire" (not sure of spelling) AFB via Andrews AFB. REACH 6014 reported his ETA USB from 2250-2251 (CG).

11175: REACH V9 radio check on 2 xmitters with Andrews AFB. USB at 1920 (CG).

11175: REACH 70463 radio check with Andrews AFB. USB at 1921. (CG)

11175: Andrews AFB with "RA7XRA stand by" 3X followed by message: "RA7XRA for AUTOSAIL" 2X. Transmission repeated by Offutt AFB one minute later. USB at 1938 (CG).

11175: REACH 5409 p/p via Offutt AFB to Buckeye Control at Wright-Patterson AFB re ETA of 2245. USB from 2007-2012. (CG).

11175: REACH 5409 p/p via Offutt AFB to METRO requesting WX at 2245Z at Wright-Patterson AFB. USB from 2015-2017. (CG).

11175: RANGER 162 radio check answered by Andrews AFB. Both reported poor copy. USB at 2053Z. (CG).

11175: GLOBAL 213 requested p/p via Offutt AFB. Party (unknown) was reached, but p/p not completed due to poor copy by GLOBAL 213. USB from 1535-1542 (CG).

11175: Andrews AFB with "VYYBXE stand by" 3X. Retransmitted by Offutt AFB one minute later. USB at 1903 (CG).

11175: OTIS 10 p/p to OTIS BASE via Andrews AFB re 1830 local time ETA. USB from 1915-1919. (CG).

11175: REACH 6175 p/p via Puerto Rico needing weather info. USB at 0010 (CG).

11175: RANGER 785 radio check, answered by Offutt AFB. USB at 1441. (CG).

11175: REACH 6947 p/p via Offutt AFB. Gave ETA of 0045. USB from 2249-2258. (CG).

11175: REACH 113T p/p with HILDA WEST via Offutt AFB USB from 0053-0120.(CG).

11175: YANKEE 311 radio check, answered by Andrews AFB. USB at 1704. (CG).

11175: "ALPHA" 50 (unsure of call sign) p/p to Offutt AFB via Andrews AFB re landing at Offutt in 1.5 hours and needing customs forms. USB from 1725-1730. (CG).

11175: REACH 5103 in QSO with Andrews AFB re flight plan info. USB at 1910. (CG).

11175: REACH 5103 p/p via Andrews AFB with unknown ground party re arrival at Homestead AFB. USB from 1913-1918 (CG).

11175: Andrews AFB calling SAM 9002 for radio check, no joy. USB at 2016. (CG).

11175: Offutt AFB calls COUNT 21 for p/p from HILDA EAST USB from 2018-2025. (CG).

11175: Andrews AFB calling SAM 9002 for radio check, no joy. USB at 2020. (CG).

11175: Andrews AFB requesting radio check. Answered by Offutt AFB. USB at 1936. (CG)

11175: COUNT 21 p/p via Offutt AFB ETA 2100Z.. USB from 1941-1950. (CG).

11175: COUNT 21 p/p via Andrews to HILDA EAST, advising they will land Andrews at 2100 as directed by Bluegrass. USB from 1950-2011. (CG).

11175: KING 21 requesting radio check. Answered by Andrews. USB at 1957. (CG).

11175: SAM flt. called by Andrews for radio check. USB at 2007. (CG).

11175: KING 21 calls Andrews for radio check. USB at 2010. (CG).

11175: COUNT 21 p/p via Offutt AFB USB from 2011-2018.(CG).

11175: REACH 6192 calling Andrews AFB to advise that the aircraft had taken off, and requesting Andrews to advise destination. Directed to Offutt AFB. USB at 1816. (CG)

11175: NAVY LY103 requested p/p from Andrews, but number was busy. USB at 1849. (CG)

11175: REACH 6192 calling Andrews AFB, requesting p/p to HILDA EAST. USB from 1852-1904. (CG)

11175: Waterbuck 762, with radio check via Puerto Rico GHFS in USB at 2235. (RW)

11175: Comet 21 and Bluegrass calling Andrews. Offutt with Y/L operator making general call at 1956 USB 1944 pp to 202-xxx-xxxx. (SW)

11175: RAZOR calls Mainsail, 2106 USB open mike, jet idle. Very heavy traffic at this time with many stations walking all over each other. REACH 5001 calls Andy for a PP to Andrews CP. (SW)

11214: ROUGHRIDER 96 with p/p via Andrews AFB (QSYed here from 11175). USB from 2132-2138. (CG).

11247: HAVEN. RAF Ascension Island 0345 USB wkg UNID w/radio check then into WX actuals. (MADX)

11253: RAF Real Fuerza Aerea, traffic for YL, USB, 2003. (EW)

11300: Yemen Airlines, aeronautic traffic, USB, 1950. (EW)

11330: New York Radio, traffic c/ aerolines + Alitalia 637, USB, 2240. (EW)

11330: AMERICAN 657, 1550 USB wkg New York Radio w/position and sc chk (BPEH). AIREVAC 1533 1552 USB wkg New York Radio FL260. (MADX)

11384: 007 ARINC Shannon HF DL//on USB. (DW)

11384: UNID FLIGHT LH8382 HF DL//on USB. Downlink to Shannon. (DW)

11384: UNID FLIGHT LH8447 HF DL//on USB. Downlink. (DW)

11406.7: FLJK, Rome, Italy 18.05 ARQ Egyptian embassy with 5-kg tfc to Cairo (PT)

11439.5: T159 US MIL ?LOC MIL.STD 188-141A ALE on USB. Sounding (DW)

11439.5: T159 US MIL ?LOC MIL.ALE 188-141A ALE on USB. Sounding. (DW)

11439.5: T159 US MIL ?LOC MIL.STD 188-141A ALE on USB. Sounding regularly thru 0635 when [CMD] (DW)

11443: S00 MFA STOCKHOLM MIL.STD 188-141A ALE on USB. Clog S97/Abidjan, also at 0257 0330 0348 0602 0625 (DW)

11443: S97 Swedish Emb. Abidjan MIL.STD 188-141A ALE on USB. Clog S97/Abidjan (self?) and S17/Maseru (DW)

11452: PE1 BRAZILIAN AF ?LOC MIL.STD 188-141A ALE on USB. Clog BA1/Brasilia(?) (DW)

11455: LIN UNID ALE on USB. Clog Turbo (DW)

11455: Londono UNID MIL.STD 188-141A ALE on USB. Clog TURBO (DW)

11465: 055 ALGERIAN MOI ?LOC MIL.STD 188-141A ALE on USB. Sounding (DW)

11466: ALR AO+G ALGIERS MIL.STD 188-141A ALE on USB.

11466: ALR AO+G ALI BEL RIDA MIL.STD 188-141A ALE on USB. Sounding (DW)

11466: OHT AO+G OHANET MIL.STD 188-141A ALE on USB. Sounding (DW)



**11492:** 6137 UNID MIL.STD 188-141A ALE on USB. Sounding. (DW)  
**11550:** SIL FBI SPRINGFIELD IL MIL.STD 188-141A ALE on USB. Cng COT, also at 0321 (DW)  
**11550:** COT UNID MIL.STD 188-141A ALE on USB. Responding to SIL/Illinois (DW)  
**11550:** T159 US MIL ?LOCMIL.STD 188-141A ALE on USB. Sounding regularly thru 0658z when [CMD][NENCEo]. (DW)  
**11647:** S53 SWEDISH EMB AMMAN MIL.STD 188-141A ALE on USB. Cng S00/Stockholm (DW)  
**12060:** UNID CW Offline encrypt (5 fig grps) in slow [16wpm] CW. Ends 1404z "cfm nil ar" (DW)  
**12086.6:** RFTJ FF DAKAR ARQ/E3//192/E/400 8rc. Betas. Poor sync. Tfc corrupt. (DW)  
**12086.6:** RFTJ FF DAKAR ? ARQ/E3//192/E/400 8rc. Bdest QRM, poor sync. Betas. (DW)  
**12087:** MMANGBUS NAT GUARD ?LOC MIL.STD 188-141A on USB. (DW)  
**12090.2:** RFTJ FF DAKAR? ARQ/E3//192/E/400 8rc. Betas. Bdest QRM, poor sync. Signal fading by 1036z (DW)  
**12101:** S00 MFA STOCKHOLM MIL.STD 188-141A ALE on USB. Sounding. 1734. Cng S53/Amman (DW)  
**12101:** S61 SWEDISH EMB NEW DELHI MIL.STD 188-141A ALE on USB. Sounding (DW)  
**12152.5:** GXQ, London, England 10.00 Piccolo 6 Op chat to GYU, Gibraltar. (PT)  
**12176:** UNID, UNID RTTY//75/R/500. (DW)  
**12186:** OWI DANISH AF AALBORG MIL.STD 188-141A ALE on USB. ALE on USB. (DW)  
**12216:** UNID, SS YL counting station with five number groups in am at 0235. (RW)  
**12225:** S73 Swedish Emb, Lagos MIL.STD 188-141A ALE on USB. Sounding. (DW)  
**12260:** S12 Swedish Emb, Bogota MIL.STD 188-141A ALE on USB. Responds to Washington/S84 (DW)  
**12260:** S94 Swedish Emb, Guatemala City MIL.STD 188-141A ALE on USB. Sounding. (DW)  
**12260:** S93 Swedish Emb, Havana MIL.STD 188-141A ALE on USB. Sounding. (DW)  
**12260:** S92 Swedish Emb, Managua MIL.STD 188-141A ALE on USB. Sounding. (DW)  
**12260:** S84 Swedish Emb, Washington MIL.STD 188-141A ALE on USB. Cng Bogota/S12. (DW)  
**12348:** PNG ANGOLAN CNSL POINTE NOIRE MIL.STD 188-141A ALE on USB. Cng LUA/Luanda. (DW)  
**12412.5:** NOJ USCG KODIAK FAX//120/576/N/800 End of test pattern, 1809z sfc analysis - grainy pix. (DW)  
**12489:** UBFX TR Ivan Polzundov 0935 ARQ tfc to Vladivostok (ML)  
**12489:** UEHC TH Antonina Nedzhdanova 1109 ARQ tfc to Vladivostok (ML)  
**12491:** UDQX TH Bulunkan 1117 ARQ msg to Kholmok (ML)

**12491:** UDRI TH Ivan Strod 1137 ARQ. (ML)  
**12510:** UGNS STM Oksu 1043 ARQ. (ML)  
**12510:** UJXC RTMA *Mramornyj* 0958 ARQ tfc to unknw (ML)  
**12561.5:** UHEX SHIP APMGRA4EW 3SC//50/R/170. (DW)  
**12561.5:** UAUC SHIP Marcel *Wasilewski* 3SC//50/R/170 BATM KLD. Tfc in 3sc. (DW)  
**12570:** Batm *Oriental Diskoverer* 0918 ARQ tfc to Vladivostok. (ML)  
**12570:** UEJW TK Silute 0942 ARQ w/67669 UEJW log on & msg for Vladivostok. (ML)  
**12570:** UHWA *STM Vima* 1023 ARQ crew msgs to Vladivostok (ML)  
**12575:** UNID SHIP UNID SITOR/A//100/E/170. (DW)  
**12577:** UNID GMDSS ALERT CHANNEL DSC//100/E/170 46 pkts in 2hrs, 17 illegals. 27 safety/tests. Cst stns logged - Brisbane, Lyngby, Madrid, Perth, Taupo. (DW)  
**12579:** NMF, USCG COMSTA Boston 1630 SITOR-B 100/170 w/N. Atlantic WX bulletin. (MADX)  
**12581.5:** XSV TIANJIN RADIO CW Chan free marker "XSV" (DW)  
**12585:** NRV USCG GUAM CW Chan free marker "NRV" (DW)  
**12586:** UDK2 MURMANSK RADIO CW Chan free marker "UD K2." (DW)  
**12587:** LZV VARNA RADIO SITOR/B//100/E/170 Tfc list. Reverts to Chan free marker "de LZV LZV." (DW)  
**12588:** HEC13 BERN RADIO CW Chan free marker "HEC." (DW)  
**12590.5:** RRR34 MOSCOW RADIO CW Chan free marker "RRR34." (DW)  
**12591.5:** UFL VLADIVOSTOK RADIO CW Chan free marker "de UFL." (DW)  
**12592.5:** NMN USCG PORTSMOUTH CW Chan free marker "NMN." (DW)  
**12593:** ESA TALLINN RADIO CW Chan free marker "ESA" (DW)  
**12593.5:** UDB2 KHOLMSK RADIO CW Chan free marker "UDB2." (DW)  
**12594.5:** A9M BAHRAIN RADIO CW Chan free marker "de A9M tlx." (DW)  
**12598:** SPA62 GDYNIA RADIO CW Chan free marker "SPA." (DW)  
**12599.5:** UAT Moscow Radio CW Chan free marker "de UAT." (DW)  
**12602.5:** IAR ROME RADIO CW Chan free marker "IAR." (DW)  
**12603.5:** SVO OLYMPIA RADIO CW Chan free marker "de SVO." (DW)  
**12606:** UIW KALININGRAD RADIO CW Chan free marker "de UIW K LD." (DW)  
**12610.5:** VCT GW NODE NEWFOUNDLAND CW Chan free marker (Globe) "VCT." (DW)  
**12613:** XSQ GUANGZHOU RADIO SITOR/A//100/E/170 QSL to UNID ship. Reverts to chan free marker "XSQ." (DW)  
**12615:** USU MARIUPOL RADIO CW Chan free marker "USU" (DW)  
**12616:** LZV VARNA RADIO CW Chan free marker "de LZV LZV." (DW)

**12623.5:** UEA Preobrazheniye rdo RUS 1130 ARQ crew msgs to ukwn ships. (ML)  
**12624.5:** UCE ARKHANGELSK RADIO CW Chan free marker "UCE" - spur? (DW)  
**12625.5:** UCE ARKHANGELSK RADIO CW Chan free marker "UCE" - constant mark tone. (DW)  
**12634.5:** TAH ISTANBUL RADIO CW Chan free marker "TAH." (DW)  
**12635.5:** LZV VARNA RADIO CW Chan free marker "de LZV LZV." (DW)  
**12639.5:** OST50 OOSTENDE RADIO CW Chan free marker "OST." (DW)  
**12649.5:** XSG SHANGHAI RADIO CW Chan free marker "XSG." (DW)  
**12654:** TAH ISTANBUL RADIO CW Chan free marker "TAH" (DW)  
**12660:** LFI GW NODE ROGALAND CW Chan free marker (Globe) "LFI." Wknbg ship in Globedata. (DW)  
**12664.5:** FUO12 FN TOULON RTTY//75/N/850 Marker "NAWS de FUO12 znr uuuuu zui testing ry's sg's" (DW)  
**12664.5:** FUM FN Paapeete 0850 RTTY 75/850 w/DE FUM - VVV - RYs tape. (ML)  
**12664.5:** FUO12 FN Toulon 0750 RTTY 75/850 w/NAWS DE FUO12 ZNR UUUUU ZUI TESTING RYs SGs tape (ML)  
**12666.5:** FUG FN LA REGINE RTTY//150/N/850. (DW)  
**12673.5:** A9M GW NODE BAHRAIN CW Chan free marker (Globe) "A9M". Wknbg ship in Globedata (DW)  
**12678:** LFI GW NODE ROGALAND CW Chan free marker (Globe) "LFI." Wknbg ship in Globedata. (DW)  
**12678:** LFI Rogaland Radio, Norge, traffic CW/SITOR. 1945Z (EW)  
**12702:** CKN CF Victoria BC, Canada, traffic RTTY/Baudot, 1955Z (EW)  
**12709:** A9M Bahrain Radio CW Marker "cq de A9M" (DW)  
**12709:** A9M Hamala Radio, Bahrein, ID + traffic CW, 2010Z (EW)  
**12711:** PWZ33 BN RIO DE JANEIRO RTTY//75/N/850 Nav wngs. Rough note, poor copy. (DW)  
**12712:** HLF GW NODE SEOUL CW Chan free marker (Globe) "HLF." (DW)  
**12730.5:** NMF, USCG Boston 1535 Fax 120/576 Nice clean chart! (RH2)  
**12801:** TAH Istanbul Radio, Turquia, ID + traffic CW, 1953. (EW)  
**12831:** 9MG Georgetown Radio, Malasya, traffic SITOR, 2015. (EW)  
**12840.5:** PBC312 DN Goeree Island, traffic RTTY/Baudot, 2005. (EW)  
**12857:** RFTJE FN Dakar, Senegal, traffic RTTY/Baudot, 1958. (EW)  
**12917:** KLB Seattle Radio, USA, ID + traffic CW, 2015. (EW)  
**12935:** HLG Soul Radio, Corea, ID + traffic CW, 2020. (EW)  
**12984:** 4XZ IN Haifa, Israel, ID + traffic CW, 2025. (EW)  
**13002:** Berna Radio, Suiza, traffic CW/SITOR, 2006 (EW)

- 13022:** SPE63 Szczecin Radio, Polonia, trafic CW/SITOR, 2009. (EW)
- 13042.5:** FN Jibuti, Djibouti, traffic RTTY/Baudot, 2005. (EW)
- 13050:** UDK Murmansk Radio, Rusia, CW/RTTY, 2030. (EW)
- 13197:** UUI Odessa Radio, Ucraina, USB, station cost, traffic for YL. 2020. (EW)
- 13200:** EAM from Andrews GHFS in USB at 2240z. several echos. (RW)
- 13270:** Gander VOLMET 0356 USB w/aviation WX. (MADX)
- 13395.7:** LKZGCG, Egyptian Embassy, Wash., DC 2105 SITOR-A 100/170 w/tfc to MFA Cairo (KDJKQOR). QRT at 2109. (MADX)
- 13396.7:** UNID, Egyptian Emb Washington SITOR/A//100/E/170 Tfc in AA(ATU80) also EE sections. (DW)
- 13452:** UNID, UNID MIL.STD 188-141A ALE on USB. Calls to SY6\_HQ (DW)
- 13452:** DUA UNID MIL.STD 188-141A ALE on USB. (DW)
- 13464:** CGE VA CARACAS MIL.STD 188-141A ALE on USB. Cng CRM4. (DW)
- 13479.7:** UNID, FF PARIS ? ARQ/342//200/E/400 8rc. 2 chan tdm. Chans A: B: betas. Poor sync, no app tfc thru 1520z. (DW)
- 13510:** CFH CF Halifax FAX//120/576/N/800 Sfc analysis (DW)
- 13510:** CFH CF Halifax RTTY//75/N/800 Met tfc. Poor copy. (DW)
- 13510.1:** CFH, Canforce Halifax 1655 BAUDOT 75/836 w/WX tfc. (MADX)
- 13527.9:** S CISN ARKHANGELSK CW Single letter HF beacon (DW)
- 13528:** C CISN MOSCOW CW Single letter [C] hf beacon (DW)
- 13530:** CESYP, Colombian Navy Special Command San Andres and Providencia Islands 2313 MIL-STD 188-141A/USB clg ESPARTANA, Colombian Coast Guard Cormoran-class patrol craft "Espartana." (PM-41) (MADX)
- 13544.2:** D2Z, Prague, Czech Rep. 14.40 FEC-A 192/400 French Embassy with service tfc to P6Z, Paris (PT)
- 13550.5:** ZKLF AUCKLAND MET FAX//120/576/N/800 Sfc analysis. Weak pix in noise floor. (DW)
- 13565:** UNID, poss UK military cyprus 1657 MFSK 4-tone 195.3/300. QRT at 1658. (MADX)
- 13570:** HLL SEOUL MET FAX//120/576/N/800 Textual fcst in Korean. Noisy. (DW)
- 13593.8:** UNID.FF PARIS ARQ/E3//192/E/400 8RC. Betas. No app tfc thru 1933. (DW)
- 13597:** JMH4 TOKYO MET FAX//120/576/N/800 24 hr sfc pressure prog. (DW)
- 13600.5:** HEC23 BERN RADIO CW Chan free marker "HEC." (DW)
- 13855:** OXT COPENHAGEN MET FAX//120/576/N/800 ice chart - Cape Farewell. (DW)
- 13882.5:** DDK6 HAMBURG MET FAX//120/576/N/800 End of chart. 0831. Global chart, fuzzy due m/path (DW)
- 13900:** BMF TAIPEI MET FAX//120/576/N/800 Textual fcst in Chinese. Blurred. (DW)
- 13920:** AXM35 CANBERRA MET FAX//120/576/N/800 Sfc pres analysis. 0845 MSL analysis. (DW)
- 13954:** HBD20/3 MFA BERN SITOR/A//100/E/170 Tfc in offline encrypt, ending (hb) d30/3. (DW)
- 13956.5:** UHT MFA TUNIS SITOR/B//100/E/170 Opchat in FF, and tfc in offline encrypt. NXZ de UHT int qsl." Tfc to RDZ - routine, offline encrypt, numbered lines. (DW)
- 13956.5:** RDZ Tunisian Emb SITOR/B//100/E/170 Cng UHT/Tunis with "qru". After response fm UHT gives "qrv" and receive tfc (DW)
- 13956.5:** PLR Tunisian Emb LOC SITOR/B//100/E/170 Cng UHT/Tunis with "qru" who responds with "qru" (DW)
- 13975:** RBL62 UNID CW "de RBL62 er qrj". Advised "as" (DW)
- 13985:** UNID UNID FAPSI RTTY//75/R/500 Tfc in offline encrypt (5 fig grps). Sign-off 1457 with "cfm tks gb sk sk" (DW)
- 14350.5:** S85 Swedish Emb MIL.STD 188-141A ALE on USB. Cng S88/Buenos Aires who responds (DW)
- 14353.5:** S12 Swedish Emb, Bogota MIL.STD 188-141A ALE on USB. Sounding, also at 0327z (DW)
- 14353.5:** S93 Swedish Emb, Havana MIL.STD 188-141A ALE on USB. Sounding. (DW)
- 14367:** BAF8 BEIJING MET FAX//120/576/N/800 Weak, grainy chart. (DW)
- 14367.7:** kdakrfzhm, MFA Cairo 1634 ARQ MsgAA to All embassies. (RH2)
- 14395:** FEMA net with CAP check in, USB 2117, Day the War started — very tough copy. (SW)
- 14400:** OLZ69, 1701 MIL-STD 188-141A/USB w/sounding call. (MADX)
- 14404:** S00 MFA STOCKHOLM MIL.STD 188-141A ALE on USB. Cng S72 Kinshasa, also at 1601, 1712, 1746, 1758, 1812, 14467.3 DDH3 HAMBURG MET RTTY/50/N/440 WX in GG (DW)
- 14467.3:** DDH8, Hamburg Meteo 1926 BAUDOT 50/428 w/call tape. (MADX)
- 14481.7:** RFTJ FF DAKAR ARQ/E3//48/E/400 8rc. Betas. 1016 cct [TJF] Controle de voie svc RFTJ de RFTJ14626.7 (DW)
- 14505:** UNID, French Forces 1936 ARQ-E 72/340 idle then fading out. (MADX)
- 7937.5:** UNID, French Mil 18.41 ARQ-E 72/400 Idling with alphas (PT)
- 14550:** H6L, Algiers, Algeria 14.34 FEC-A 192/400 French Embassy calling P6Z, Paris. (PT)
- 14585.7:** prob RFPT, French Forces N'Djamena 1952 ARQ-E3 200/400 idle. (MADX)
- 14653:** MMMANGB U.S. Nat Guard ALE on USB. Cng HQ1 Arlington (DW)
- 14670:** CHU TS OTTAWA CW Time sigs on USB. Vocal announcement and data bursts. (DW)
- 14812.5:** S84 Swedish Emb, Washington MIL.STD 188-141A ALE on USB. Cng Bogota/S12 (DW)
- 14876.7:** RFLIG, French Forces Cayenne 1938 ARQ-E3 192/386 w/plaintext FF report. (MADX)
- 14926.7:** RFTJ FF DAKAR ARQ/E3//192/E/400 8rc. Betas. 1309z cct [TJD] RFTJD de RFTJ svc "zah JDJ630 format ligne 2". 1408 Controle de v svc RFTJ de RFTJ (DW)
- 14959.8:** RFTJ FF DAKAR ARQ/E3//192/E/400 8rc. Betas. Frequent motorboating type QRM. Poor sync. (DW)
- 14996:** RWM TS MOSCOW CW Time signals. (DW)
- 15016:** Offutt AFB calling MAINSAIL. USB at 2041. (CG)
- 15016:** REACH 6192 called by Puerto Rico, no joy. USB at 2101. (CG)
- 15016:** REACH 6192 called by Offutt AFB for radio check, no joy. USB at 2102. (CG)
- 15016:** REACH 6192 p/p with HILDA EAST via Andrews AFB. USB from 2103-2106. (CG)
- 15016:** OFFUTT 0454 USB w/EAM. /13200/11271/11244/11175/ 9057/9025/. (MADX)
- 15025:** 003 ARINC REYKJAVICK HF DL// on USB. Squitters. 1552 uplink to logon confirm to ICAO 52160602 as ID11. (DW)
- 15633:** HMF26 KCNA PYONGYANG RTTY//50/N/250 Press in EE. 300 Hz high. (DW)
- 15647.7:** RFTJF, FF PORT BOUET ? ARQ/E3//48/E/400 8rc. Betas. No app tfc, eventually fading/no sync by 0900. (DW)
- 15682:** SNN299 MFA WARSAW CW(F1A-250HZ) Periodic marker "vvv de SNN299 pse ga" buried in bcast QRM. (DW)
- 12666.7:** PWX?, Brasil Navrad 1910 fax 120/576. (RH2)
- 15682:** UNID, MFA Warsaw 1535 Pol-ARQ 100/240 Claris/Consul Msgs/Pol. (RH2)
- 15760:** SIL FBI SPRINGFIELD IL MIL.STD 188-141A ALE on USB. Sounding, also at 0317. (DW)
- 15794:** UNID, poss UK military, Cyprus 1714 MFSK 4-tone 195.3/300. (MADX)
- 15820:** S53 SWEDISH EMB AMMAN MIL.STD 188-141A ALE on USB. Sounding (DW)
- 15860:** S00 MFA STOCKHOLM MIL.STD 188-141A ALE on USB. Cng S97/Abidjan. (DW)
- 15860:** S85 Swedish EMB LOC MIL.STD 188-141A ALE on USB. Cng S88/Buenos Aires (DW)
- 15860:** S97 Swedish Emb, Abidjan MIL.STD 188-141A ALE on USB. Sounding. Cng S00/Stockholm 2246, 2350. (DW)
- 15898:** RFGW MFA PARIS FEC/A//192/E/400 Cct [NKT] to Z4D/Nouakchott. Idling RQ's and tfc in FF and in offline encrypt. (DW)
- 15920:** CFH CF HALIFAX RTTY//75/N/850 Marker "NAWS de CFH zkr fl 3287 4161 6236 8312 12380 16552 ar." (DW)
- 16014.2:** RFVI FF LE PORT ARQ/E3//100/E/400 8rc. Betas. 2125 cct [RUN] Controle de voie svc RFQP de RFQP. (DW)
- 16026.9:** BAF9 BEIJING MET FAX//120/576/N/800 Vague outlines in noise. (DW)
- 16027:** NPN, Apra Harbor, Guam (???) 19.40



FAX 120/576 Very poor rx of WX chart. No ID but NPN prev. reported this freq. (PT)

**16027.7:** NPN USN GUAM FAX//120/576/R/800 (USB of 16029.6) Graining pix. Offair 0956z (DW)

**16035:** 9VF252, Singapore 18.37 FAX 60/576 KYODO press agency with news sheet in EE, about Afghan refugees and anti-US protests in Indonesia. In parallel with 16971 and 17430 (PT)

**16056.7:** UNID, Egyptian Emb, Riyadh SITOR/A//100/E/170 Tfc in AA(ATU80). Off air 1121. (DW)

**16098:** HBD20, Bern, Switzerland 10.55 ARQ 5-Ig tfc to Teheran embassy. (PT)

**16105:** S00 MFA Stockholm MIL.STD 188-141A ALE on USB. Sounding and at 1813. (DW)

**16125.2:** RFQP FF DJIBOUTI ARQ/342//200/E/400 4rc. 2 chan tdm. A: B: betas. Variable signal, no app tfc thru 1509. (DW)

**16168:** UNID, UNID RTTY//75/R/500 End of transmission. 8bit. Offline encryption? then "sk" and off air. (DW)

**16181:** S53 Swedish Emb, Amman MIL.STD 188-141A ALE on USB. Cng S00/Stockholm. Sounding at 1409. (DW)

**16213.7:** UNID, MFA Cairo SITOR/A//100/E/170 Tfc in AA(ATU80). Occ stops, restarting with selcall XBVF(Madrid). Tfc thru 1109. (DW)

**16227:** UNID, UNID FAPSI RTTY//75/R/500 Tfc in offline encrypt. Next header "1117740034097311099409419" then stops followed by cw opchat "qsy 1728(?) " then "qsl cfm qsg(?) sk." (DW)

**16260:** RFGW, MFA PARIS FEC/A//192/E/400 Tfc in offline encrypt ("c" procedure in use) to H6L/Algiers. (DW)

**16280:** OWK DANISH AF HQ VEDBAEK MIL.STD 188-141A ALE on USB. Cng OWI/DAF Aalborg. (DW)

**16280:** OWK DANISH AF HQ VEDBAEK MIL.STD 188-141A ALE on USB. Responding to OWP/?loc. (DW)

**16280:** OWP DANISH AF LOC MIL.STD 188-141A ALE on USB. Cng OWK/HQ Vedbaek. (DW)

**16281.8:** UNID, Egyptian Emb ALGIERS SITOR/A//100/E/170 In irs mode followed by tfc in AA(ATU80) to Cairo. (DW)

**16315.5:** UNID, FAPSI 1641 Crowd36 40bd. (RH2)

**16324.7:** RFTJD FFLIBREVILLE ARQ/E3//192/E/400 8rc. Betas. Pr sig/sync. 2012z cct [JDJ] Controle de v svc RFTJ de RFTJ. (DW)

**16327:** OWF DANISH AF SKRYDSTRUP MIL.STD 188-141A ALE on USB. Responding to OWP/DAF ?loc. (DW)

**16327:** OWP DANISH AF MIL.STD 188-141A ALE on USB. Cng OWF/DAF Skrydstrup. (DW)

**16347:** GYU, Gibraltar 18.09 ITA2 75/850 DE GYU LOLOLOLO + test + foxes. (PT)

**16710.5:** UFLP TR Voudal 1146 ARQ w/66082 UFLP log on & msg to Kaliningrad. (ML)

**16710.6:** UBKS RTMS Sokrat 0649 ARQ msg to Kaliningrad. (ML)

**16713:** UHXS M/V *Refrigerator* -204 0843 ARQ svc & crew msgs to Vladivostok. (ML)

**16717.5:** UBPC TH Nikolaj Smelyakov 0732 ARQ msg EE to unkwn. (ML)

**16787.5:** SNVX SHIP HOMAR SITOR/A//100/E/170 Tfc in Polish followed by OPR+ and query. (DW)

**16801.5:** ESME BMRT Soela 0931 RTTY 50/170 clg Kaliningrad to crew msg. (ML)

**16803.5:** UDHY BATM Zamoskvoretchie 0732 RTTY 50/170 LANGERU msg to Kaliningrad. (ML)

**16808:** SPA81 GDYNIA RADIO CW Chan free marker "SPA." (DW)

**16812.5:** NRV USCG GUAM CW Chan free marker "NRV." (DW)

**16813:** UAT Moscow Radio CW Chan free marker "de UAT." (DW)

**16814:** WLO Mobile Radio CW Chan free marker "WLO." (DW)

**16814.5:** CBV VALPARAISO RADIO CW Chan free marker "CBV." (DW)

**16816:** ZSC GW NODE CAPETOWN CW Chan free marker. (Globe) "ZSC" (DW)

**16816.5:** NMC USCG PT REYES CW Chan free marker "NMC" (DW)

**16817:** WCC GW NODE DELAWARE CW Chan free marker (Globe) "WCC" wkng ship in Globedata (DW)

**16819.5:** NMN USCG PORTSMOUTH CW Chan free marker "NMN" (DW)

**16820:** IAR ROME RADIO CW Chan free marker "IAR" (DW)

**16825:** VCT GW NODE TORS COVE CW Chan free marker (Globe) "VCT", wkng ship in Globedata (DW)

**16830.5:** SVU6 OLYMPIA RADIO SITOR/B//100/E/170 Greek shippress (DW)

**16841.5:** 8PO GW NODE BARBADOS CW Chan free marker (Globe) "8PO" and wkng ship in Globedata (DW)

**16842.5:** KEJ GW NODE HAWAII CW Chan free marker (Globe) "KEJ" and wkng ship in Globedata (DW)

**16847:** UGH2 Yuzhno-Sakhalinsk rdo RUS 0920 ARQ msg to UIKR TBS Neftegaz-70, QSX was 16724.0. (ML)

**16881.5:** A9M Bahrain Radio CW Chan free marker "de A9M tlx" (DW)

**16971:** JJC, Tokyo, Japan 18.07 FAX 60/576 KYODO press agency with news sheet in EE. In parallel with 16035 and 17430 (PT)

**17166:** CLA, Havana Radio 1506 CW w/channel mkr. (MADX)

**16997.5:** WLO, Mobile Radio 1510 SITOR-B 100/170 w/tfc list. (MADX)

**17045.9:** 9MG, Penang R 1630 ARQ marker. (RH2)

**17132:** MGJ RN Faslane 0900 RTTY 75/850 CARBS + 60P 80P 92P 96P. (ML)

**17314:** SPO81, Szczecin Radio 1149 USB w/news broadcast in Polish. (MADX)

**17415:** S00 MFA STOCKHOLM MIL.STD 188-141A ALE on USB. Cng S31/Algiers. Also at 1643 1646 and 1754. (DW)

**17427:** S73 SWEDISH EMB LAGOS MIL.STD 188-141A ALE on USB. sounding. (DW)

**17430:** 9VF209, Singapore 19.30 FAX 60/576 KYODO press agency with "JJC FACSIMILE NEWSPAPER BROADCAST" with content in JJ. In parallel with 16035 but 16971 faded away by this time (28Se01). (PT)

**17484:** CCM, Chilean Navy Puerto Magellanes 1637 RTTY 100/850 5LG. (RH2)

**17973:** DL0002DAT, UNID Rockwell Collins 1603 MIL-STD 188-141A/USB w/sounding call. (MADX)

**17982:** Planes of de Varig, aeronautic traffic USB, 2000. (EW)

**18036:** W3S French Emb Islamabad 0950 FEC-A 192/850 5LG msg to Paris. (ML)

**18040.5:** HGX?, UNID 1600 Dup-ARQ 125/170 5LG ends-"IAR-92." (RH2)

**18183.4:** GMC, Algiers, Algeria 09.40 Coquelet 8 MFA with tfc in FF to Lagos. Calling "LGS DE GMC" and "LAGOS DE ALG." (PT)

**18183.4:** 7RQ20, MAE Algiers 1613 Coq8 26.67 NxVFF to "All Stations." (RH2)

**18183.4:** 7RQ20, MAE Algiers 1613 Coq9 26.67 Super Flash MsgVFF to Ambalg Niamey. (RH2)

**18183.4:** UNID, Ambalg Dar-es-Salaam 1623 Coq8 26.67 MsgVFF to MAE cc Ambalg Kampala. (RH2)

**18185.6:** S73 Swedish Emb, Lagos MIL.STD 188-141A ALE on USB. Sounding. Also at 1715. (DW)

**18185.6:** S73 Swedish Emb, Lagos MIL.STD 188-141A ALE on USB. Cng S00/Stockholm. (DW)

**18203.7:** UNID MFA Cairo SITOR/A//100/E/170 Selcals KKXT/Nairobi. tfc in AA(ATU80) and in offline encrypt. (DW)

**18203.7:** MFA Cairo (JG 74) 0710 ARQ 5LG msg to Nairobi. (ML)

**18204:** GAO Algerian Emb, Garoua MIL.STD 188-141A ALE on USB. Cng MAE/Algiers. (DW)

**18204:** NMY Algerian Emb, Niamey MIL.STD 188-141A ALE on USB. Cng MAE/Algiers. (DW)

**18220:** JMH5 Tokyo MET FAX//120/576/N/800 Weak, noisy pix. Wave prognosis? (DW)

**18225:** BMLV1 AUSTRIAN MOD MIL. STD 188-141A ALE on USB. Cng 11111/UNID. (DW)

**18239.8:** KDQIKEF, UNID Egyptian Emb. 15.15 ARQ Tfc in AA to Cairo. (PT)

**18241.7:** UNID Egyptian Emb. Bamako SITOR/A//100/E/170 End of msg and sign-off opchat in AA. (ATU80) (DW)

**18243.7:** UNID Egyptian Emb, Asmara SITOR/A//100/E/170 Tfc in AA(ATU80) and sign-off 1616. (DW)

**18258.5:** HBD20, MFA Berne 1728 SITOR-A 100/170 w/ endless 5LGs. QRT at 1825. (MADX)

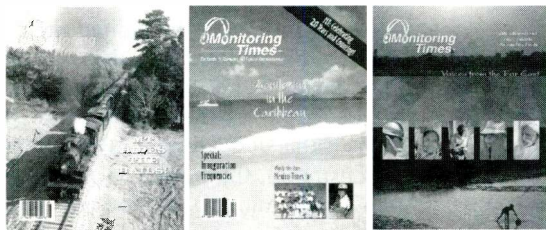
**18268:** HBD20, Bern, Switzerland 13.00

ARQ to HBD88, Tripoli embassy. (PT)  
**18270:** OLZ88 MFA PRAGUE MIL.STD 188-141A ALE on USB. Clnq OLZ84/UNID emb. (DW)  
**18326.7:** UNID MFA CAIRO SITOR/A//100/E/170 Tfc in AA(ATU80). Loss of qso, selcalls TVVX/Algiers. Tfc (Urgent) in offline encrypt to multiple addressees. (DW)  
**18326.7:** UNID, prob MFA Cairo 1458 SITOR-A 100/170 signal too weak to copy. (MADX)  
**18447.7:** RFPTA FF NDJAMENA ? ARQ/E3//200/E/400 8rc. Betas. Offair with no app tfc thru 0920. (DW)  
**18667.7:** UNID Egyptian diplo SITOR/A//100/E/170 irs mode then switches to fec and short section of AA(ATU80). Reverts to ARQ/irs but no further tfc. (DW)  
**18667.7:** JMFS——M, Madrid, Spain 14.30 ARQ 100/65 Egyptian embassy with tfc in AA to Khargia Cairo. (PT)  
**18686:** S00 MFA Stockholm MIL.STD 188-141A ALE on USB. Clnq S53/Amman. (DW)  
**18686:** S53 Swedish EMB AMMAN MIL.STD 188-141A ALE on USB. Sounding. (DW)  
**18686:** S61 Swedish EMB NEW DELHI MIL.STD 188-141A ALE on USB. Sounding. (DW)  
**18756:** S00 MFA Stockholm MIL.STD 188-141A ALE on USB. Clnq Kinshasa/S72 and at 1158z. Sounding 1053. (DW)  
**18945:** S00 MFA Stockholm MIL.STD 188-141A ALE on USB. Clnq S97/Abidjan. (DW)

**18945:** S97 Swedish Emb Abidjan MIL.STD 188-141A ALE on USB. Sounding. Also at 1819. (DW)  
**19031.7:** UNID Pakistani Emb Algiers SITOR/A//100/E/170 Loss of QSO, selcalls KMEU, reestablish QSO. Each over terminated with "\$p algiers an A37." (DW)  
**19043:** 055 Algerian MOI ALE on USB. Sounding, also at 1358. (DW)  
**19051.8:** UNID FF UNID ARQ/E3//192/E/400 8rc. Poor signal/sync. (DW)  
**19101.7:** RFLI FF FORT DE FRANCE ARQ/E3//192/E/400 8rc. Betas. 1337 cct [BFL] C de v svc RFLI de RFLI. (DW)  
**19131:** 32C, USCG HH-60J #6032 1430 USB wkg ATLAS w/position report. At 1431, PANTHER, DEA Nassau clg 32C. (MADX)  
**19131:** PANTHER 200, DEA Grand Inagua 1435 USB wkg ATLAS w/radio checks. (MADX)  
**19141.4:** UNID Algerian Diplo UNID COQ/8//1/-/- Giving qsl's and other occ chat in FF. (DW)  
**19204.7:** RFVI FF LE PORT ARQ/E3//100/E/400 8rc. Betas. 1419 cct [VII] C de V svc RFVI de RFV.I. (DW)  
**19216:** S00 MFA Stockholm MIL.STD 188-141A ALE on USB. Clnq S31/Algiers (DW)  
**19216.7:** UNID FF FT DE FRANCE ARQ/E3//96/E/400 8rc. Betas. No tfc thru 1543. (DW)  
**19225.2:** UNID FF UNID ARQ/E3//200/E/400 8rc. Weak, little sync. Betas. No app tfc thru 1556. (DW)

**19241.9:** UNID, loc. UNID 10.20 Pactor 200/200. (PT)  
**19359.6:** UNID MFA Cairo SITOR/A//100/E/170 Tfc in AA(ATU80) to UNID (corrupted). Con tone btwn bursts. Off air 1608 (DW)  
**19423.5:** S53 Swedish Emb, Amman MIL.STD 188-141A ALE on USB. Clnq S00/Stockholm. (DW)  
**19655:** HEC GW NODE BERN CW Chan free marker (Globe) "HEC." (DW)  
**18888.5:** 9HIP6 TK Grigorij Nesterenko 0850 ARQ tfc to Novorossiysk. (ML)  
**19571.7:** MFA Cairo 0750 ARQ msg, in ATU-80, to unkwn. (ML)  
**19640:** C3P French Emb. Tokyo 0750 FEC-A 192/850 clg Paris w/P6Z DE C3P RYs 1-0 & op chat, then off-air. (ML)  
**19652:** S5F, Brasilia, Brazil 18.16 FEC-A 192/850 French embassy with 5-lg tfc to Paris (PT)  
**19675.2:** UNID FF UNID ? ARQ/342//200/E/400 4rc. 2 tdm. A: B: Weak, little sync. (DW)  
**19692.5:** ZSC Capetown Radio SITOR/B//100/E/170 WX for S African High seas and coastal areas followed by Nav wngs. (DW)  
**20010:** S00 MFA Stockholm MIL.STD 188-141A ALE on USB. Sounding. (DW)  
**20010:** S60 Swedish Emb, Islamabad MIL.STD 188-141A ALE on USB. Sounding and at 1644 (DW)  
**20035.4:** HGX21 MFA BUDAPEST

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ARTRAC//125/N/170 Tfc in HH - news bulletin. (DW)

**20120:** S12 Swedish Emb, Bogota MIL.STD 188-141A ALE on USB. Sounding. (DW)

**20120:** S92 Swedish Emb, Managua MIL.STD 188-141A ALE on USB. Sounding. (DW)

**20179.7:** RFFA FF Paris ARQ/E3//100/E/400 8rc. Weak sig, Cct [IRE] tfc in FF and in offline encrypt. (DW)

**20596:** A25, Latvian military 1529 USB clg PAMATS, Latvian Military. At 1624, SIRDS, Latvian military w/sounding call. (MADX)

**20631:** GUA USAF ANDERSON GUAM MIL.STD 188-141A ALE on USB. Sounding. (DW)

**20633.7:** RFVI FF LE PORT ARQ/E3//100/E/400 8rc. Betas. 1347 cct [REI]. (DW)

**20698:** S94 Swedish Emb, Guatamala City MIL.STD 188-141A ALE on USB. Sounding. (DW)

**20698:** S92 Swedish Emb, Managua MIL.STD 188-141A ALE on USB. Sounding. (DW)

**20805.2:** RFQP FF Djibouti ARQ/342//200/E/400 4rc. Weak sync, no app tfc thru 1535. (DW)

**20942:** S97 Swedish Emb, Abidjan MIL.STD 188-141A ALE on USB. Sounding. (DW)

**20958:** S12 Swedish Emb, Bogota MIL.STD 188-141A ALE on USB. Sounding. Also at 1738. (DW)

**20958:** S92 Swedish Emb, Managua MIL.STD 188-141A ALE on USB. Sounding. (DW)

**20958:** S61 Swedish Emb, New Delhi MIL.STD 188-141A ALE on USB. Sounding. (DW)

**20958:** S92, Swedish Embassy Managua 1613 MIL.STD 188-141A/USB w/sounding call. (MADX)

**20985:** S85 Swedish Emb MIL.STD 188-141A ALE on USB. CIng S88/Buenos Aires, also at 1741. (DW)

**22316.5:** UGSN LK Admiral Makarov 0751 ARQ w/55074 UGSN log on & tfc to Vladivostok. (ML)

**22316.5:** UHLR TH Mikhail Sholokhov 0812 ARQ svc msg Vladivostok. (ML)

**22320:** VTP. Indian Nvy Vishakhapatnam 0820 RTTY 50/1200 id tape & 4LG msgs. (ML)

**22407.5:** UAT, Moscow, Russia 11.00 FEC CQ CQ DE UAT and tfc list. (PT)

**22537:** FUF, French Navy Fort de France 2008 BAUDOT 75/836 w/test tape. (MADX)

**22924:** MTS, Port Stanley, Falkland Is. 14.00 Piccolo 6 Op chat to GXQ. (PT)

**22928.6:** S00 MFA Stockholm MIL.STD 188-141A ALE on USB. CIng S97/Abidjan (DW)

**22928.6:** S97 Swedish Emb Abidjan MIL.STD 188-141A ALE on USB. CIng. (DW)

**22928.6:** S79 Swedish Emb Lusaka MIL.STD 188-141A ALE on USB. CIng S00/Stockholm. (DW)

**22928.6:** S97, Swed Emb, Abidjan 1317 Ale/USB SND. (RH2)

**23016.7:** Egyptian Emb Beijing (JG YWS—

-G) 0630 ARQ msg, in ATU-80, for Cairo. (ML)

**23337:** Andrews AFB 1731 Ale/USB SND Several repeats. (RH2)

**23337:** CRO, USAF Croughton 1726 Ale/USB SND repeats. (RH2)

**23337:** HAW, Ascension 1730 Ale/USB SND. (RH2)

**23337:** MCC, West Coast USA 1829 Ale/USB SND. (RH2)

**23370:** HZN50, Jeddah Meteo 1921 BAU-DOT 100/660 w/metar WX tfc. (MADX)

**23526:** S73 Swedish Emb, Lagos MIL.STD 188-141A ALE on USB. Sounding. (DW)

**23591:** S85, Swedish Emb, Brasilia 1851 Ale/USB SND. (RH2)

**24332:** UNID UNID PICC// Very weak, on standby. (DW)

**25012.4:** MGJ, Faslane, UK 14.50 ITA2 75/400 CARBS transmission on old MTO freq. (PT)

**25022:** MGJ RN FASLANE RTTY//75/N/850 CARB. Channel desigs 02d 03b 04b 16c 22d 25d 60p 80p 92p 96p MGJ" (DW)

**25222:** S93 Swedish Emb, Havana MIL.STD 188-141A ALE on USB. Responds to Washington/S84. (DW)

**25222:** S84 Swedish Emb, Washington MIL.STD 188-141A ALE on USB. CIng Havana/S93. (DW)

**26331.7:** RFVIT, Comterre St. Denis 0638 ARQ-E3 100/400 to Region Paris Les Loges. (RH2)

**26331.7:** RFFVIREs, Comar La Reunion 0650 ARQ-E3 00/400 to Zen/Cosru Port de Galets. (RH2)

**26331.7:** RFVIC, Basenav Port des Galets 0654 ARQ-E3 100/400 to RFVIT/Dirante St. Denis. (RH2)

**26331.7:** RFVIBDS, La Boudeuse 0707 ARQ-E3 100/400 to RFFLCVM/Serflotrans Toulon. (RH2)

**26331.7:** RFVIBDS, La Boudeuse 0714 ARQ-E3 100/400 5LG to RFFKNPN & many others. (RH2)

**26331.7:** RFVI, Comar La Reunion 0732 ARQ-E3 100/400 to ZOC/AIG1946 & RFVITT/Mayotte & RFQP/Jibouti - Navarea V11 WX. (RH2)

**26660:** S92 Swedish Emb, Managua MIL.STD 188-141A ALE on USB. Sounding. (DW)

**26660:** S84 Swedish Emb, Washington MIL.STD 188-141A ALE on USB. Sounding. (DW)

**26895.5:** UNID UNID PICC// 26895.510 on standby. Not tfc thru 2025 when offair or faded. (DW)

**29940:** S84 Swedish Emb, Washington MIL.STD 188-141A ALE on USB. CIng Havana/S93 (DW)

This month's contributors are:

CG — Chris Gray

RW — ColonelDX

DW — Day Watson

EW — Enrique Wembagher

MADX — Midatlanticdixer

ML — Murray Lehman

PT — Peter Thompson

RH2 — Robert Hall

SW — Sue Wilden

Thanks to all of you for your continued good work. As always, it is very much appreciated.

## Next Month

Next month I am going to be looking at the history of radio regulation in the United States and how it has affected people who have wanted to monitor radio transmissions.

This history is particularly important to the readers of this column, as it was not until the early days of the 1920s that radio broadcasting — that is the deliberate transmission of signals for anyone to hear — was begun. Prior to that time all transmissions were made point to point, and both commercial and military officials were not happy about the fact that ordinary citizens could listen in.

Likewise our current laws and regulations came directly out of an incident that echoes the destruction of the World Trade Towers on September 11th. That was the sinking of the British passenger ship *Lusitania* by German submarine U-39 on May 7, 1915. The ship sank in 15 minutes with the loss of more than 1,200 lives, setting off a sense of shock and outrage amongst the people of the United States that mirrors the feelings of today.

What makes that event of direct interest to those of us who monitor radio transmissions is that at the time of the sinking of the *Lusitania*, the owner of an armature radio monitoring station in New Jersey claimed to have intercepted a message from a commercial German radio station located in the United States that contained the instructions to sink the passenger ship.

The information provided by this armature radio monitor, even though it was unsubstantiated in fact, was used by the U.S. government to bring in many laws that established the licensing of radio stations, set out the regulation of station activities, and led to the formation of commissions such as the FCC.

If that is what happened then, what will the impact of current events have upon the hobby of radio monitoring in the future? That will be examined in the next column.

Until then, let us pray for peace soon, and support our government in its efforts to bring those who caused the terrible events of September 11 to justice. ■

# v.i.p.

## spotlight

### Congratulations To Jerry Cross Of Poughkeepsie, New York!



Jerry Cross at his monitoring station in upstate New York.

please send them in a separate E-mail with your name in the "subject" line.

#### Our January Winner: Jerry's Love For Radio Started With A Poker Game!

*Pop'Comm* reader Jerry Cross of New York says, "I got started in SW monitoring because of a poker game while I was in the Air Force. One guy put up an AM/FM/SW portable radio, and lost. (I had two pair). He never did come back for the radio.

Then one night, I dialed across the shortwave bands. I found the BBC, Moscow, and Cuba on that first night. I was hooked and have monitored shortwave ever since. That was 21 years ago. I currently own a DX-160, two DX-302s, DX-375, ICOM IC-R75, ICOM IC 725, and several scanners. In the picture to the right of the clock is a VCR. I use a Phillips four-head VCR to record transmissions. A VCR tape will last six hours compared to cassette tape of 30 minutes. My favorite stations include WBCQ, Radio Taipei, Aviation Volmet, and Coast Guard Weather.

In the picture you can see one of my DX-302s, the ICOMs IC-R75, IC-725, PRO-2021 scanner, tape recorder, and the VCR. Oh yeah, I'm in there too." ■

**P**opular 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](mailto: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,

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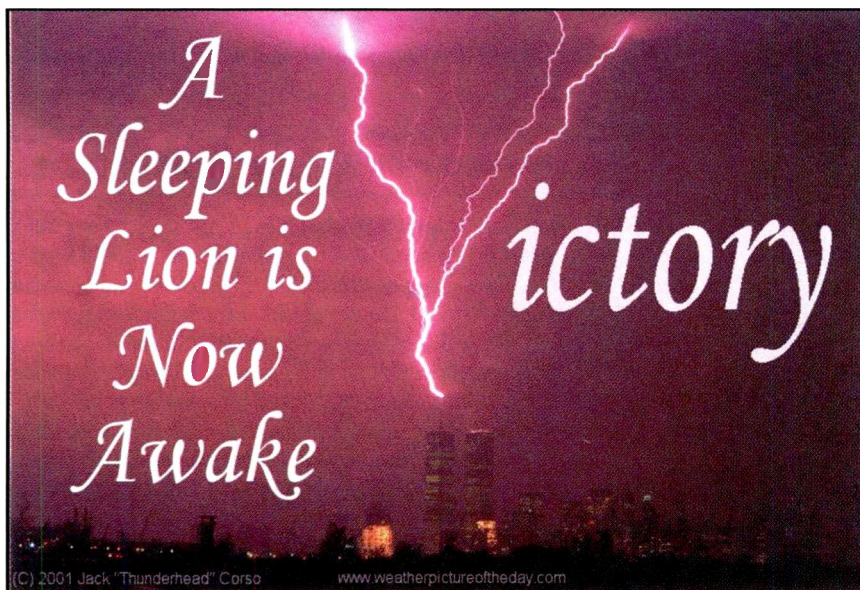
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## Remembering Photo Essays On The Internet



Lightning strikes the WTC TV antenna. ( Photo by Jack Corso.)

September 11, 2001 will be remembered as one of the most horrific and tragic days ever experienced in the United States. Those responsible for or supporting the events of that day will ultimately “pay the price” with the knowledge that their cowardly acts served only to “awaken a sleeping lion” and galvanize the people of our great nation. Victory WILL be ours!

Many thanks to Jack Corso for the incredible photo of lightning striking the World Trade Center’s TV Antenna and to weatherpictureoftheday.com for making his image available. The original photo (without my superimposed “feelings”) can

be found at <http://www.weatherpictureoftheday.com/images/wtc-strike-large.jpg>.

While the focus of “iWaves” is typically on streaming media resources, I’ve taken some liberties this month by including pointers to some extraordinary photo essays and other material in addition to the normal format. Not because there’s a lack of audio-visual material but rather some aspects of this tragedy, I believe, need to be experienced without sound or motion.

To the “do-gooders” of the world who promote “turning the other cheek” as a response, I say, while listening to the sounds, look, REALLY look at these photos and videos. Then consider that it could have been YOU, YOUR mom, dad, brother, sister, other relative or close friend in those planes and buildings who were terrorized, murdered, and buried in the rubble. Just thinking about the incomprehensible terror, suffering, and losses incurred by innocent human beings, at the cowardly hands of international thugs, continues to tear my heart apart.

It is with deepest sympathy to families and friends of the victims, and heartfelt praise for those who continue to give so much of themselves in responding to this tragedy, that I dedicate this month’s column.

### Two Exceptional Resources

I had initially considered trying to provide you with a large list of URL’s in an attempt to make the “coverage” of this horrific event as complete as possible. However, as I began my research, it became quite evident that I could not begin to accomplish that task in the limited space available here — not to mention the amount of typing you would have to do just to access those resources. Consequently, I narrowed my search to find a resource or two that would accomplish the same thing in an easier format for you to use. Indeed, the two resources noted below, (“September 11 — Journalists’ Resources” and “Current Awareness Resources via Streaming Audio & Video”) offer an enormous amount of detailed information at the click of your mouse. Based on my research, you’d be hard pressed to even find some of the exceptional material these folks have made available. Bookmark and point your browser to “September 11 - Journalists’ Resources” from MediaMap at <http://www.mediamap.com/Sept11.asp>.

“Current Awareness Resources via Streaming Audio & Video by Gary Price, MLIS” is located at <http://gwu.edu/~gprice/audio.htm>.

The most updated coverage, plus a substantial amount of archived material can be found at the major TV networks’ web

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**September 11 -- Journalists' Resources**  
<http://www.mediamap.com/Sept11.asp>

**Current Awareness Resources via Streaming Audio & Video**  
Compiled by:  
**Gary Price, MLIS**  
George Washington University  
Washington D.C. and Ashburn VA  
<http://gwu.edu/~gprice/audio.htm>

Two exceptional resources covering the events of September 11, 2001.

sites. While I'm sure most of you know the URLs by heart, I've included them below just in case. Be sure to explore the menu listings of these sites to find the archived files. As time progresses, it's becoming more and more difficult to find media from the early days of the attacks as the networks shift emphasis to our response to them. However, if you look closely at the available menus, you should be able to find what you're seeking. Visit:

- ABC: <http://abcnews.go.com/>
- CBS: <http://www.cbs.com/>
- CNN: <http://www.cnn.com/>
- MSNBC: <http://www.msnbc.com/>

### Particularly Moving Sites

For the balance of this month's column, I'd like to take you on a journey to some specific resources that I've found especially moving or extremely rich in content. With one exception, (CSPAN.org) I've not commented on a specific resource since the resource titles and screen shots speak for themselves.

**MSNBC.COM - IMAGES OF TERROR** —  
<http://www.msnbc.com/news/173305.asp?0ss=N21024009>

The images found here will tear at your heart.

**FEMA.GOV - DISASTER PHOTO ARCHIVES** —  
<http://www.fema.gov/library/photo.htm>

Huge photo archives are available at FEMA.gov's site.

**TIME.COM - PHOTOESSAYS** —  
<http://www.time.com/time/photoessays/>

One of the images from Time.com's photo essay section.

**THE MIAMI HERALD — LEONARD PITTS JR. COMMENTARY** —  
<http://www.miami.com/herald/content/features/columnists/pitts/digdocs/000565.htm>

Read The Miami Herald's Leonard Pitts Jr.'s powerful, inspirational and moving commentary on the events of September 11, 2001. In my view Leonard has captured, in words, the very essence of America.

**YAHOO! NEWS - WORLD NEWS** —  
<http://dailynews.yahoo.com/h/a/g/nm/wl?u>

Many links to audio/visual archives plus current world events coverage can be found at Yahoo! News.



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CSPAN.org ("Public Affairs on the Web") is probably home to the world's largest audio/visual archives in terms of political happenings and public affairs in the United States. C-SPAN, a private, non-profit company, was created in 1979 by the cable television industry as a public service. Their mission is to provide public access to the political process. Once you've browsed their site, I know you'll agree. C-SPAN receives no government funding and is operations funded by fees paid by cable and satellite affiliates who carry C-SPAN programming. This is one site you will want to spend some time browsing. Be sure to use their comprehensive search facilities (found on each page) to locate specific areas of interest. Naturally, the events of September 11 are covered in detail. Don't miss it.

Thanks for tuning in. I hope by the time you read this, at least the major players who wreaked such havoc on our people, have been found and dealt with accordingly. May God Bless America and all that we stand for.

**Important Note**

There comes a time when one must evaluate the reality of what a person physically can do with what he or she would like to do. In the case of my "iWaves" and "Radio and The Internet" columns, both are "part-time" activities that utilize available "free" time to research and write. Unfortunately, I no longer have that free time due to a significantly increased and projected long-term workload. To continue these columns would be to shortchange you and *Pop'Comm* with only a "lick and a promise" approach. I will not subject you or *Pop'Comm* to that type of journalism. Consequently, this issue marks the last of my "iWaves" and "Radio and The Internet" submissions. I've thoroughly enjoyed working with *Pop'Comm's* extraordinary editor, Harold Ort, in trying to bring you useful and interesting material each month. I hope you'll rate those efforts as being successful. It's been fun. God Bless and take care. ■

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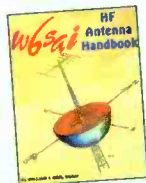
Amateur Radio Calendar brings you 15 spectacular images of some of the biggest, most photogenic shacks, antennas, scenics and personalities.

### W6SAI HF Antenna Handbook

by Bill Orr, W6SAI

Inexpensive, practical antenna projects that work! Guides you through the building of wire, loop, Yagi and vertical antennas.

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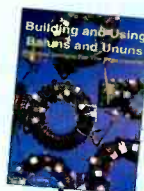


### Building and Using Baluns and Ununs

by Jerry Sevick, W2FMI

This volume is the source for the latest information and designs on transmission line transformer theory. Discover new applications for dipoles, yagis, log perimeters, beverages, antenna tuners, and countless other examples.

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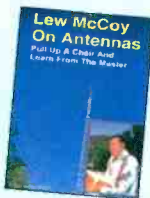
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### McCoy on Antennas

by Lew McCoy, W1ICP

Unlike many technical publications, Lew presents his invaluable antenna information in a casual, non-intimidating way for anyone!

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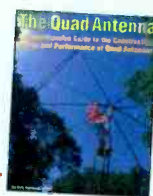
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### *If It's Still There: Catching Afghan Radio*

Suddenly everybody wants to hear Afghanistan! But — except for the East Coasters (and then only when the wind is right) — most of us would do just as well holding a seashell to our ear! Afghan Radio — officially The Radio Voice of Shari'ah — is listed for 100 KW, which makes you think it shouldn't be that tough to hear. But lists are one thing, reality another. It's a very good bet that this one isn't pumping out anything near 100 KW. The station's so-called external service airs at terrible times for North American reception: 1530 to 1710 in various area languages, plus English. The chances of hearing the broadcast scheduled for our evenings, from 0100 to 0245 are just a teeny bit better. They're listed for **7085** but overseas loggings indicate they tend to drift up almost to 7090, although they usually hover around **7087**. By the time you read this, though, all this may be moot — it may have been knocked off the air or even destroyed.

Reporter Mike Miller of Washington State E-mailed the station a rather "strong" note after the September 11 tragedies and got this response:

"Dear Friend: Aiming your justified anger at us and threatening with hate mail those who, like you, oppose it is not the right way to combat terror. We are with you and against those who committed the atrocities yesterday. Just because we run an Afghan radio does not mean that we are with the other side. We are Americans and have warned U.S. officials for years that Ben Laden and the Taliban are a threat. We are opposed to them. Direct your anger at those who support the Taliban and Ben Laden. Afghanistan is a victim too, and its people are hostages of these terrorists . . ."

By the way, it's probably news to most (as it was to us) that there are supposedly Americans working at Afghan Radio!

On another front, several have noted they were unable to listen to the BBC World Service on the Internet during the height of the crisis due to the overwhelming demand for access. As Mike Miller noted "I wonder if the BBC still thinks it's a good idea to go to the Internet or satellite as opposed to HF to get their broadcasts, in light of recent events?"

Watch for another of those UN Peacekeeping efforts to put a station on shortwave, as they've done before in a couple of other African countries. A UN station may well be on the air from **Congo-Kinshasha** by the time you read this. The government station there, Congolese National Radio-TV, says it will have a new 100 KW transmitter on the air, again, probably by the time you read this. Check **15245** (variable) during the afternoon. In the past they haven't exactly set any masts aquiver.

One of the more reliable of the numerous low power, out-of-band Peruvians lately is **Radio Union in Lima**, which is now operating on **6350v**. We caught them at a very weak level the other evening around 0030 but the signal soon "faded up" to pretty good strength and fair readability. This is probably the same station, which previously used 6115.

Venezuelan time station **YVTO** reportedly has moved from 5000 and settled on **5030**. All we get there is a steady tone —

no time ticks or IDs as they normally do. Whatever it is, the signal is pretty strong and has got to be an irritant to Dr.Gene, who holds forth nightly on that frequency.

Our somewhat belated congratulations to North America's only all-SWBC club — the North American Shortwave Association — celebrating 40 years of operation! Few others have hit that mark so it's a significant feat any day. NASWA puts out an excellent monthly bulletin (The NASWA Journal), which contains feature articles, station schedules, QSL news, and log tips. It also operates an awards program, a "Company Store" and also maintains the NASWA SWBC Country List, which has become the standard for most serious listeners in North America. You can get a sample bulletin for \$3 from NASWA, 45 Wildflower Rd., Levittown, PA 19057. Check out their web site at: [www.anarc.org/naswa](http://www.anarc.org/naswa).



*Radio Vlaanderen International is the first station highlighted in our new "Good Listening" feature.*

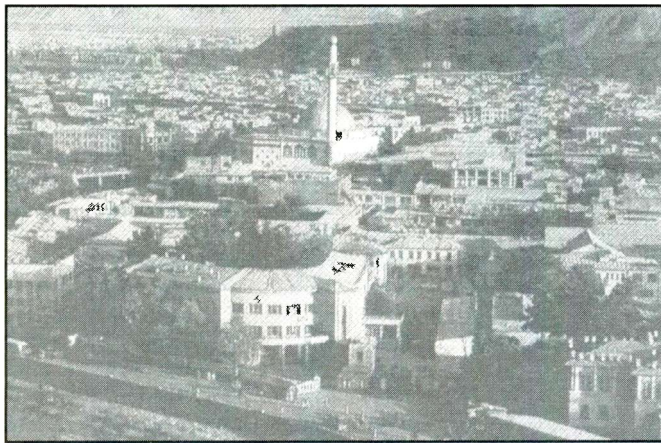
#### **Good Listening!**

"Good Listening" is the name of a new feature we're going to insert into the column — hopefully every month. The idea is to highlight the schedule content of a different broadcaster each month. We've "hired" Iowa's very knowledgeable Jim Conrad to give you his picks. First up: the 0400 broadcast from **Radio Vlaanderen International on 15565:**

2230 & 0400 (Su-Fri) Soundbox  
(Su) Radio World/Tourism/Brussels 1043 (Listener's Letters)

- (M-F) News
- (M-F) Belgium Today
- (M-F) Press Review
- (Mo) Focus On Europe/Sports
- (Tu) Green Society
- (We) The Arts/Around Town
- (Th) Economics/International Report
- (Fri) The Arts/Tourism
- (Sa) Music From Flanders

Note this is just for the 0400 transmission. Other time periods may have slightly different content.



*Kabul, Afghanistan. Club Med doesn't operate here!*

*Rich D'Angelo (PA) got this QSL from Radio Ecclesia, Angola. Back in the good old days this station broadcast on shortwave from Luanda; now it airs via the Julich, Germany, relay.* →



Ondas Curtas <swave@recclesia.org> on 06/26/2001 02:25:40 PM  
Recepção das Ondas curtas

Prezado Senhor Richard:

É com grande prazer que recebemos a sua carta, falando da recepção da nossa emissão no dia 20 de maio de 2001

De facto nos confirmamos que foi a Rádio Ecclesia, transmitindo desde Angola para todo o país, que você ouviu. A nossa emissão iniciou no dia 20 de abril de 2001, nas seguintes frequências:

1. 06h00- 07h00: KHZ.
2. 19h00- 20h00 KHZ.

Agradecemos imenso pelo envio do vossa informação. Aproveitamos também de endereçar os nossos cumprimentos a sua esposa Susan, e aos seus filhos Adan e Jennifer. Prometemos enviar o nosso cartão de recepção, e uma lembrança pelo correio postal.

Desde Angola, os nossos sinceros agradecimentos.

Ir, Maria Sps

This month's book winner is Michael Miller of Issaquah, Washington — a stalwart in the loggings section. Mike receives a copy of the 2002 edition of *Passport to World Band Radio*, courtesy of Universal Radio. Mike's package will also contain a copy of Universal's 100+ page catalog containing every kind of radio goodie you can imagine. You can get a copy for yourself by contacting Universal via their web site: [www.universal-radio.com](http://www.universal-radio.com), phone them at: 614-866-4267 or write to: 6830 Americana Parkway, Reynoldsburg, OH 43068. Just do it!

Remember we're always in need of interesting things we can use as illustrations. That includes photos of you and your equipment, station photos, shack photos, spare QSL cards you've received, schedules, and station brochures — whatever!

Needless to say your reception logs are of utmost importance. We make every effort to use most, if not all, of the logs sent in, so don't be shy or feel that yours aren't good enough. Just be sure to list your logs by country and leave enough space between them so we can navigate the scissors easily. Logs are cut into strips and then sorted by country, so be sure to use only one side of the paper, otherwise some of your listings won't survive the cut, so to speak! As always,

thanks so much for your continued interest and participation!

Here are this month's logs. A super listing this time! No need to toe-test the water, just dive right in! 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.

**ALBANIA** — Radio Tirana, 0145 on **6120** and as the female anncr was reading the frequency list they shifted down to **6115**. 0145 is a new start time. (Montgomery, PA) **7160** at 0230 with AA-type music and discussion on European Union. (Linonis, PA) Trans World Radio, **6235** at 0428 sign-on to 0445 close. IS, news in Slovak, hymn and vocals. Thanks to Jerry Berg. (Paszkievicz, WI)

**ANGUILLA** — Caribbean Beacon, **6090** heard at 0316 with Gene Scott preaching. (Newbury, NE)

**ANGOLA** — Radio Nacional, **11955.8** at 0015 with PP talks, variety of PP pops, Euro-pop, techno-pop, DJ. // **4950**, both fair. (Alexander, PA)

**ANTIGUA** — Deutsche Welle relay, **6040** at 0135. (Newbury, NE) **6960** to Australia in GG at 0709. (Becker, WA) BBC relay, **5975** at 0135. (Newbury, OR)

**ARGENTINA** — Radio Nacional, **6060** at 0935 with news in SS, nice ID and promo string at 0938. ID and TC at 0941, f/by more news.

#### Abbreviations Used in Listening Post

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

(D'Angelo, PA) **15345** in SS at 2310 on a Sunday. RAE is here during the week. (Watts, KY) RAE, **11710** at 0215 with EE news from Argentina. Off abruptly at 0220. (Burrow, WA) 0250 with schedule for soccer matches. (Barton, AZ)

**ARMENIA** — Voice of Russia via Armenia, at 0300 sign-on in SS to South America on **9965**. (Brossell, WI) Voice of Armenia, **9960** at 1940 with EE news, ID, local music, ID, address and off at 2000. Not on Sundays. (Alexander, PA)

**ASCENSION ISLAND** — BBC relay, **7120** with "This Week From Africa" pgm at



0435 tune. (MacKenzie, CA) **11765** in PP at 2248 with website — www.bbcbrasil. (Paszkievicz, WI) **12095** at 2135. (Watts, KY) 2250. (MacKenzie, CA) 2310. (Brossell, WI) **21630** in FF at 1800. (Brossell, WI)

**AUSTRALIA** — Radio Australia, **6020** at 1225 and **9580** at 1300. (Northrup, MO) **9660** from Brandon at 0710. (Becker, WA) **15515** at 0318. (Newbury, NE) 0545 with parallels **15240**, **17580** and **17750**. (Barton, AZ) **17580** at 0754. (Smith, WA) **21740** at 2105. (Watts, KY) 2115. (Linonis, PA) 0000, //17795. (Newbury, OR) Christian Voice, Darwin, **21550** at 0145 with religious messages, Bible stories, contemporary Christian music, IDs and schedule. Weak to fair. Weaker on //21680. (Alexander, PA)

**AUSTRIA** — Radio Austria Int'l, **9870** at 0128 with ID, tune and news. (Smith, WA) 0133. (Barton, AZ) Adventist World Radio/Voice of Hope, **15195** at 2104 with EE religious programs, AWR ID, address in Nairobi, Kenya and "Reflections" program. (Alexander, PA)

**BELARUS** — Radio Minsk, **7210** at 0200 sign-on with IS, EE anmts with ID, schedule, news, comment. (Alexander, PA) 0208 with news in EE. (Paszkievicz, WI)

**BELGIUM** — RTBF, **9490** via Julich, Germany at 0305 with FF news, TC, ID, dance music. (Paszkievicz, WI)

**BOLIVIA** — Radio San Gabriel, **6085.2** heard at 0936 with music, talk in Aymara, no ID noted and buried by WYFR carrier at 0953. Poorly modulated and drifting slightly. (D'Angelo, PA) Radio Fides, **6155.1** heard at 1050 with ID by fast-talking anncr, banco commercials and political talk in SS. (D'Angelo, PA)

**BOTSWANA** — VOA relay, **15445** with "Our World." (Jeffery, NY)

**BRAZIL** — Radio Nacional Amazonia, **6180** in PP at 0052, 0137 and 0943, all PP. (Miller, WA) 0250 with pop tunes, ID at 0259 and PP talk. (Brossell, WI) Radio Difusora Roraima, **4875** at 0943 with continuing music. (Jeffery, NY)

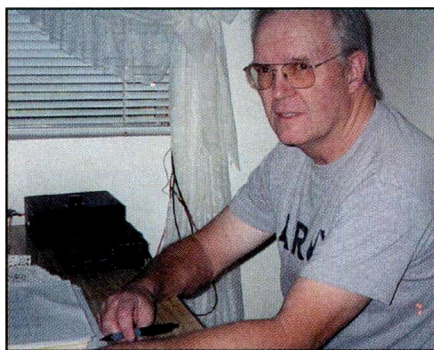
**BULGARIA** — Radio Bulgaria, **11900** at 2152. (Foss, Philippines) 2155 "That ends our broadcast from Radio Bulgaria." Instrumental music to 2200 close. (Brossell, WI)

**BURKINA FASO** — Radio Burkina, **4815** at 2340 with Afro-pops, hi-life music, FF talks. (Alexander, PA)

**CANADA** — CBC, **9625** at 0219 with classical music by a Canadian musician. (Newbury, NE) **17695** with news at 2259. (Miller, WA) Radio Canada Int'l, **15305** at 2215 with sports discussion. (Linonis, PA) **17695** at 2330. (Newbury, OR)

**CHILE** — Voz Cristiana, **11690** in SS with religious pops at 0256. (Newbury, NE) **15375** at 0920, //11745 slightly weaker, 6070 was much stronger. Promos, lively music, IDs at 0929 and 0932. (Montgomery, PA) **21550** in SS at 2110. (Linonis, PA) 2235. (Barton, AZ)

**CHINA** — China Radio Int'l, **6000** (maybe via Cuba — gld) in SS at 1110. **6020** in CC at 1225. **15550** in CC at 1200. (Northrup, MO)



*Here's log reporter Pete Becker of Clarkson, WA. Pete's probably listening to one of those wild Chinese regionals he's always reporting.*

**7405** at 1325. QRM from Radio Marti. **7820** in RR at 1329. (Becker, WA) **9580** at 0110. Must be new and from Sackville as signal is a real flamethrower. (Montgomery, PA) **9700** at 1437. (Foss, Philippines) **11900** at 0744 in SS. (Smith, WA) **2252** in SS with CC songs. (Paszkievicz, WI) **13680** at 3230. (MacKenzie, CA) **15440** at 2200–2300 in CC. (Linonis, PA) **17720** with news at 1515. (Barton, AZ) China National Radio (CPBS) **11630** in CC at 2235. (Brossell, WI) Voice of the Strait from Fozhou, **6115** at 1522 with discussion in CC. (Foss, Philippines) Radio Yunnan, **6937** at 1301 with talking, yelling and singing in CC. (Becker, WA) Radio Heilongjiang, **7350** in CC at 1229 with abrupt sign off. (Becker, WA) Voice of Pujiang, **4950** in CC at 1140. (Becker, WA) Radio Yizang, Lhasa, **7170** in CC at 1310. (Becker, WA)

**COLOMBIA** — Radio Nacional, **9635** in SS at 0443 with talk and music. (Jeffery, NY) La Voz del Llano, **6114.9** at 0850 in SS with ID 0858, talks, promos. (Montgomery, PA)

**COSTA RICA** — World University Network (Gene Scott) on **9725** heard at 0707. (Becker, WA) Radio Casino, **5954** heard at 1030 sign-on with national anthem, anmts, ID, news, vocals, time check, jingle. (Paszkievicz, WI)

**CUBA** — Radio Reloj, on Radio Havana's **9550** frequency at 0711 with time ticks, news and announcements every minute, then suddenly gone. (Becker, WA) Radio Rebelde, **5025** in SS at 0645. (Becker, WA) Radio Havana Cuba, **9820** at 0230. (Newbury, NE) 0703 with music, anthem and sign off. (Becker, WA)

**CYPRUS** — BBC relay, **12095** at 0338 with economic talk. Not //11835. (Newbury, NE) **15575** at 1445. (Brossell, WI) **21470** at 1735. (Jeffery, NY)

**CZECH REPUBLIC** — Radio Prague, **9870** at 0311. (Newbury, NE) **15445** at 2100 in African dialect immediately after VOA sign-off. (Brossell, WI) 2220 in FF. Relay via Sackville? (Linonis, PA)

**DENMARK** — Radio Denmark, via Norway, **17505** with presumed news in DD at 1730. (Brossell, WI)

**ECUADOR** — La Voz del Napo, **3280** in SS with music at 1015. (Miller, WA) HS210A time station, **3810** with time signals at 0635. (Becker, WA) HCJB- **11920** in PP at 0143. (Miller, WA) **12005** at 1145. (Northrup, MO) **15115** at 0245 with "Just Jazz." (Wilden, IN) **15140** in SS at 0256. (Newbury, NE) **17660** at 1911. (Jeffery, NY) To Europe at 2050. (Watts, KY)

**EGYPT** — Radio Cairo, **9475** with music and news at 0201. (Burrow, WA) **9900** at 0229. (Smith, WA) 0023 and 0250 in AA also **12050** in AA at 0335. (Newbury, NE) **12050** in AA at 2229 and 2235. **15210** in unid. African dialect at 2025. (Brossell, WI) 1918 in unid. language. (Jeffery, NY) 2040 to 2100 in EE. (Linonis, PA) **17800** in AA at 0335. (MacKenzie, CA)

**ENGLAND** — BBC, **9580** at 1215. (Northrup, MO) **9915** at 0253 and **11835** at 0313. (Newbury, NE) 13745 in unid. language at 1430. (Barton, AZ)

**EQUATORIAL GUINEA** — Radio Nacional, Malabo, **6249** at 2220 to 2303 close in SS with woman anncr and non-stop vocals. Into their familiar long orchestral national anthem without any anmt but the anthem was cut after only one minute. (D'Angelo, PA) SS talk and pops. Off with anthem at 2259, carrier off 2301. (Alexander, PA)

**FINLAND** — Scandinavian Weekend Radio, **11720** at 0308 with mix of talk, blues & country. Address and phone number were mentioned on a few occasions. Fair at tune in but just barely there at tune out. (D'Angelo, PA) YLE/Radio Finland Int'l, **15445** with news in Finnish at 1500. (Miller, WA)

**FRANCE** — Radio France Int'l, **5990** in SS at 1225, then into FF. (Northrup, MO) **6180** — unknown site — at 0856 in EE. (Miller, WA) **15515** (via French Guiana — Ed) in FF at 1115. (Northrup, MO)

**GABON** — Africa Number One, **15475** at 1725 with hi-life music and FF anmts. (Brossell, WI)

**GERMANY** — Deutsche Welle, **9735** in GG at 0225. (Newbury, NE) **12055** via Novosibirsk, Russia with tones at 2258, ID by man at 2300. DW IS at 2305. (Montgomery, PA) **13640** heard at 2322. (Foss, Philippines) **17595** in SS at 2044. (MacKenzie, CA) Sudwestfunk, **7265** in GG at 0343 with pop tunes, female DJ. (Brossell, WI)

**GREECE** — Voice of Greece, **9420** in Greek at 0430. (Jeffery, NY) **12105** in Greek at 0341. (Newbury, NE) **2300** here and //15650 in Greek. (MacKenzie, CA) 2230. (Miller, WA)

**GUAM** — Armed Forces Network, **5765** USB with music at 1236. (Becker, WA) **13363** heard at 1450 with rock, CNN news, ID "This is the Armed Forces Network" at 1500. (Brossell, WI)

**GUATEMALA** — Radio Cultural, **3300** in SS with religious music at 1008. (Miller, WA) Radio Verdad, **4052.5** in SS at 1125. (Becker, WA)

**GUINEA** — RTV Guineenne, **7125** in FF at 2225 with hi-life music, FF talks, ID

"Radiodiffusion du Guinea" at 2231. (Brossell, WI)

**HAWAII** — Armed Forces Network, **6348 USB** with a consumer affairs program and ID at 1058. (Becker, WA) KWHR, **9930** with ID, address at 1205. (Becker, WA) 1232 with Bible readings in a play format. (Brossell, WI)

**HONDURAS** — La Voz Evangelica, **4819** at 0303 with religious programming in SS. (Jeffery, NY) Radio Costena, **4930.6** with vocals at 0158, ID, jingle, children giving ID with echo effects, address. (Paszkiwicz, WI)

**HUNGARY** — Radio Budapest, **9570** at 0230 with multiple IDs, various reports and features. Web page lists EE to North America at 0430-0500, 9560 listed for EE at 0300. EE not shown for this time/frequency. (Silvi, OH)

**INDIA** — AIR — Mumbai, **4840** heard at 0049 with mostly local music program and little talk. Tentative ID. Gone by 0100. (Montgomery, PA) AIR — Delhi, **4860** heard at 0032. Woman anncr with news, ID and Hindi vocals. (D'Angelo, PA) AIR — Bangalore, **11620** at 0236 to past 0300 with talks and music in presumed Hindi. (Brossell, WI) AIR — Aligarh, **11710** at 1205 in Burmese. Continuous music to IS (which sounds like Indonesia's Song of the Coconut Islands). Woman opening segment at 1215, then to man with what appeared to be news. (Montgomery, PA)

**INDONESIA** — Radio Republik Indonesia, Jakarta, (tentative) **15125** at 1200 with ID, possible frequency listing and news. (Linonis, PA) Voice of Indonesia, **15150** at 2000-2100 with EE news, comment, ID, local pops. (Alexander, PA) RRI — Palangkaraya, Kalimantan, **3325** in II at 1340. (Miller, WA) RRI — Ternate, Maluku, **3345** at 1342 in II with news. (Miller, WA) RRI — Jambi, Sumatera, **4925** in II with music at 1357. (Miller, WA)

**IRAN** — VOIRI, **9022** with Holy Koran at 0232. (Brossell, WI) **9835**, //11970 with EE sign on at 0031. (Newbury, NE) **13635** in Farsi at 2305. (MacKenzie, CA) **15084** in presumed Farsi at 2200. (Linonis, PA) **15585** in Farsi at 1230. (Northrup, MO) **15770** in CC at 0018. (Paszkiwicz, WI)

**IRELAND** — Radio Telefis Eireann, **6155** heard via UK at 0140 with news items. (Newbury, NE)

**ISRAEL** — Kol Israel, **9345** with march music at 1049. (Smith, WA) **15640**, //17535 in HH with two men talking. (MacKenzie, CA) **15760** in HH at 2215. (Linonis, PA) **17535** in HH at 1730, ID 1735. (Brossell, WI) Galei Zahal, **6973** at 0230 with local pops, folk music, talks in HH. Off 0230. **15785.1** from 0257 sign-on with local pops, folk music, HH talk. (Alexander, PA)

**ITALY** — RAI Int'l, **11800** at 0303 in SS with big band music and SS vocalist. (Newbury, NE) 2240 with "RAI Internacional para Sud America." (Brossell, WI) Radiodue (Sicily) **7175** at 0250 with open carrier, bells, IS, short anthem, 5 + 1 time pips at 0400, ID and opening by woman, music bridges and



*The entrance to the IBB ( Voice of America) transmitting site at Delano, CA. (Photo by Don Schmidt, Long Beach, CA)*

eventually into II vocals. (D'Angelo, PA)

**JAPAN** — Radio Japan/NHK, **9505** at 1434. (Newbury, NE) 1710 with news, "44 Minutes." //11970, **9505**//11895 at 1615 in JJ. **9835** in JJ at 1746. (MacKenzie, CA) **13650** at 0005 with news. **17685** with "Focus on Asia" at 0110. (Foss, Philippines) **17810** in JJ at 0337, **17825** in EE at 0345, **17845** in JJ/RR at 0355, **17875** in JJ at 0238. (MacKenzie, CA) **21670** in EE at 2129. (Jeffery, NY) NSB/Radio Tampa, **3925** in JJ at 1023. (Smith, WA) **3945** in JJ at 1120 and **9760** in JJ heard at 0805. (Becker, WA)

**JORDAN** — Radio Jordan, **11690** at 1300. They continue to use this frequency despite very strong RTTY QRM. Impossible to even tell the language. (Alexander, PA)

**KUWAIT** — Radio Kuwait, **11675** in AA at 0255. (Newbury, NE) **15495** and **15505** in AA at 1230. (Northrup, MO)

**LIBERIA** — Radio Liberia Int'l, **5100** at 2330 with pops, time check, ID, woman anncr. No anthem at 2358 sign-off. (Alexander, PA)

**LIBYA** — Radio Jamahiriya, **17725** in AA at 0326 with anmts, music. (MacKenzie, CA) Voice of Africa, **15435** with EE at 0321-0325. FF at 0325-0328, //17725. Not usually heard with two frequencies in use at the same time. (Alexander, PA)

**LITHUANIA** — Radio Vilnius, **11690** (via Germany?) at 0041 with EE economic and financial news. (Newbury, NE)

**MALAYSIA** — Radio Malaysia, **7295** heard at 1541 with music and PSAs, ID and news at 1600. (Burrow, WA) Radio Malaysia, Sarawak, **7270** at 1230 with prayers. (Barton, AZ)

**MEXICO** — Radio Educacion, **6185** at 0155 with EE ID by woman 0200. Typical Mexican music. (Montgomery, PA) 0520 with

baroque music, SS anmts. (Newbury, NE) 0725 in SS. (Becker, WA) Radio Mexico Int'l, **9705** at 2320 in SS with folk music. (Linonis, PA) (The address is Apartado Postal 21-300, 04021 — Mexico 21, D.F., Jack —Ed) 1350 with peppy Salsa tunes. (Barton, AZ)

**MOLDOVA** — Voice of Russia via Moldova, **7180** at 0211. (Brossell, WI) **9665** at 0221 with Joe Adamov saying a doctor in Moscow makes \$85 a month. (Newbury, NE)

**MONACO** — Trans World Radio, **9870** at 0700. "Hello and welcome." (Becker, WA)

**MONGOLIA** — Voice of Mongolia, **12085** at 1055 with exotic-sounding female vocal, EE ID with times and frequencies. (Foss, Philippines) 1100 with IS, ID and into news focusing on Mongolia and Asia. (Linonis, PA)

**MOROCCO** — RTV Marocaine, **11920** at 0320 with AA vocals. (Newbury, NE) **15340** at 0911 in AA with regional music. (Montgomery, PA) **15345** in AA at 2035. (Brossell, WI) VOA relay, **7270** at 0310. Somali government celebrates its 10th anniversary. (Newbury, NE)

**NETHERLANDS** — Radio Netherlands, **9895** in DD heard at 0658. (Becker, WA) **15220** from (?) at 1439 with news items. (Newbury, NE)

**NETHERLANDS ANTILLES** — Radio Netherlands Bonaire relay, **9590** at 0428 with ID and frequencies. (Smith, WA) **9820** to Australia at 0704. (Becker, WA) **9845** at 2332. (Newbury, OR)

**NICARAGUA** — Radio Miskut, **5770** in SS at 2348. Tentative ID as it was weak and copy was difficult. First time heard in months. (Montgomery, PA)

**NEW ZEALAND** — Radio New Zealand Int'l, **9885** with news at 1100, off 1105.



(Barton, AZ) **11675** at 1142 with news. (Miller, WA) Discussion of TV ad controls at 1220, ID "This is Radio One" at 1223. (Brossell, WI) **17675** with report on U.S. politics at 2223. (Foss, Philippines) 0114 with "Cadenza." (Jeffery, NY) 0300. (Linonis, PA) 0308. (Newbury, OR) 0322 "The Wonderful World of Louis Armstrong." (Foss, Philippines) Announced schedule: **9825** at 1600, **15160** at 1850, **17675** at 2215, **15340** at 0500, **9885** at 0700, **11675** at 1100. (name omitted)

**NIGERIA** — Radio Salama, via UK, **15475** at 1930 with Dr. Abdula hosting. ID with request for letters and comments. P.O. Box 126, Kensington, Nigeria. Says program was produced in London. Another request for letters at 1942 and 1958. Otherwise, religious content. (Montgomery, PA) Voice of Nigeria, **7255** at 2155 to 2300 sign-off. EE mailbag program, local pops, IDs, off with anthem. (Alexander, PA) 0450 with continuous music, man with ID, anthem/choir, woman with ID at 0456 and news at 0500. (MacKenzie, CA) 0500 with Afro-pops. (Newbury, OR) 0701. (Becker, WA)

**NORTH KOREA** — Pyongyang Broadcasting Station, **3320** in KK at 1547 with large mixed chorus. (Foss, Philippines) **6398.8** in KK at 1040. Man with long talk. (Montgomery, PA) Korean Central Broadcasting Station, Pyongyang, **2850** at 1400 in KK with man talk, women's chorus. (Foss, Philippines) Voice of Korea, **6520** in JJ at 1150. (Becker, WA) 9820 with EE sign on at 1200. (Newbury, OR) **13760** at 1459 with anthem, "This is the Voice of Korea." (Brossell, WI) **17735** in SS at 0248. (MacKenzie, CA)

**NORTHERN MARIANAS** — Far East Broadcasting Co./KFBS, Saipan, **11580** with EE/CC lesson at 1252. (Miller, WA) Radio Free Asia, via Tinian on **13695** in CC at 1516. (Barton, AZ)

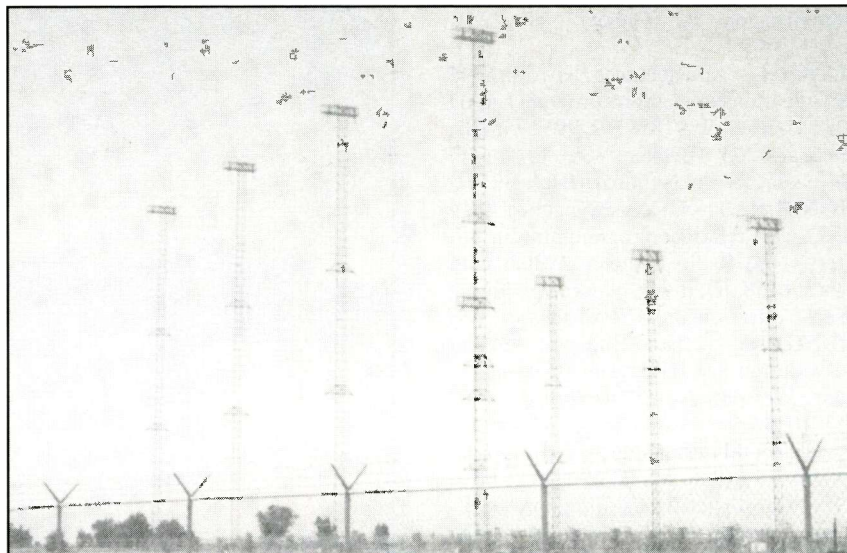
**NORWAY** — Radio Norway, **9945** with news in NN at 2306. (Paszkievicz, WI) **9985** in NN at 0248. Off at 0255. (Brossell, WI) **13800** at 1459 with ID at 1500 and start of broadcast in NN. (Foss, Philippines)

**OMAN** — Radio Oman, **9735** from 2152-2301 with romantic vocals to Big Ben-like chimes at top of the hour, ID and news by man in AA, then more AA vocals until more chimes. ID by man and carrier off. Noted opening on **9760** at 2302 during a newscast. (D'Angelo, PA)

**PAKISTAN** — Radio Pakistan, **15624.4** at 1210 with EE ID by woman, back into unid but listed Nepali at this time. A few EE words now and then. Beamed to India and south. Local music at 1222. (Montgomery, PA) **17520** at 1055 with EE news, ID at 1100, Urdu anmts, string instrumental music, eulogy and prayer for someone who apparently died earlier in the day. (D'Angelo, PA)

**PALAU** — KHBN — The Voice of Hope, **9965** at 1226 with religious programming in presumed Tagalog. (Brossell, WI)

**PAPUA NEW GUINEA** — NBC Port Moresby, **4890** at 0959 with news. (Miller,



*Rotatable antennas at the VOA-Delano, CA, site. (Photo by Don Schmidt)*

WA) 1135 with pop music and requests. (Becker, WA) **9675** at 0850 with pops and news on the hour. Suddenly dropped out around 0908. (Montgomery, PA) Radio Sanduan, Vanaimo, on 3205 with news in EE at 1011. (Miller, WA) Radio East New Britain, Rabaul, **3385** with political speech at 1021. (Miller, WA) Radio Manus, Lorengau, **3315** with EE and music at 1231. (Miller, WA) Radio New Ireland, Kavieng, **3905** with ID by woman at 1026. (Montgomery, PA)

**PARAGUAY** — Radio Nacional, **9735** at 0010 with news in SS. (Miller, WA)

**PERU** — La Voz de la Selva, (Iquitos) **4824.4** at 1000 sign-on. Opening ID and anmts in SS, female vocals. (D'Angelo, PA) Radio Libertad (Junin) **5039.3** at 1004 with long talk in SS, ID, female vocals and flute music. (D'Angelo, PA) Ondas del Rio Mayo, **6797.5** in SS at 1215. (Becker, WA) Radio Union, **6348.9** at 0725 with OA music, wobbly, drifting transmitter. Last heard in July on 6313. Next night was on **6351.2** at 0140. (Alexander, PA)

**PHILIPPINES** — Far East Broadcasting Co., **12065** at 2245 in Indonesian. Woman with comments, man with vocal hymns. (MacKenzie, CA) Radio Pilipinas, **11885** at 0312. (Smith, WA) **15190** at 1904 with EE news by woman, man with ID, commentary, full ID and off at 1930. (D'Angelo, PA) Radio Veritas Asia, **7265** at 1318 in VV. (Becker, WA) 1325 "This is Radio Veritas Asia, broadcasting from Quezon City, Philippines." (Foss, Philippines) VOA relay, **9760** at 1235. (Brossell, WI) **9770** at 1738 with "Talk to America." // **9550, 9785**. (MacKenzie, CA) **17820** at 2300 with news. (Newbury, OR)

**PORTUGAL** — RDP Int'l, **15295** in PP from 0145 to 0159. Anthem, then "RDP Portugal" ID at 0200. (Brossell, WI)

**ROMANIA** — Radio Romania Int'l, **11775** at 2300 with EE. This frequency, beamed to Europe, is often better here than those beamed to North America. (Silvi, OH)

**11940/15340** at 0208 with news, ID. (Burrow, WA) **17805** at 1752 with classical music. Off at 1756. (Foss, Philippines)

**RUSSIA** — Voice of Tatarsan, **11665** at 0358 sign-on. IS at 0400, ID by woman, another IS and ID. Long talks and some musical features. (D'Angelo, PA) Voice of Russia, **9480** from Khabarovsk in CC at 1143 and **9490** presumed Irkutsk. (Becker, WA) **11750/17650** with Moscow Mailbag at 0410. (Barton, AZ) **12020** in RR at 1150. (Northrup, MO) **15460** in RR at 1445. (Brossell, WI) **17565** from Komsomolsk at 0315. // **17650** and **17690** both from Petropavlovsk-Kam. **17690** at 0405, // **17650** Petropavlovsk, **17660** Vladivostok, **11750** Krasnarovsk (Hope that's the right translation of your abbreviation, Stewart). 1200 via Khabarovsk and **17565** via Komsomolsk. (MacKenzie, CA) Radio Rossii, **11980** in RR at 0238, // **12020**. (Brossell, WI) 0323 in RR with vocal. // **12020**. (Newbury, NE) Petropavlovsk Radio, **7340** in KK to East Asia at 1201. (Becker, WA) Radio Tikhy Okean, **12070** to Pacific and North America in RR at 0645. (Becker, WA) Magadan Radio, **9530** in RR at 0725. (Becker, WA)

**RWANDA** — Deutsche Welle relay, on **11785** in GG at 2240. (Brossell, WI) **13780** in GG at 2325. (MacKenzie, CA) **15275** at 2305 in GG. (Watts, KY) **21560** at 1747 in GG. (Jeffery, NY)

**SAO TOME** — VOA relay, **7290** at 0345. (Brossell, WI)

**SAUDI ARABIA** — BS of the Kingdom, **11820** with AA talk heard at 2243. (Brossell, WI) **21600** in AA at 1450. (Newbury, NE)

**SEYCHELLES** — BBC relay, **9770** at 0245. (Brossell, WI) Far East Broadcasting Assn., **15445** at 1241 in unid. language. Religious music. (Miller, WA)

**SINGAPORE** — BBC relay, **9605** at 1726 in various languages to Asia. **9740** in CC/EE at 1735. **17760** at 0327 with news and features. (MacKenzie, CA) Radio Corp. of

Singapore — **6150** at 2324 with report on aviation training and 1029 with traffic, sports. (Foss, Philippines) Radio Singapore Int'l. **9600** with news at 1130. (Barton, AZ)

**SOLOMON ISLANDS** — Solomon Is. Broadcasting Commission, **5020** at 0930 with mentions of Bougainville and Papua New Guinea. (Linonis, PA) 0954 with news in Pidgin. (Miller, WA)

**SOUTH AFRICA** — Trans World Radio, **7215** with talks and music in African dialect at 0335. (Brossell, WI) Channel Africa, **17870** with news at 1809. (Jeffery, NY)

**SPAIN** — Radio Exterior de Espana, **15110** at 2200 with IS, SS ID and into South America and Caribbean beam. (Linonis, PA) **15290** in EE with sports, weather, headlines at 2025. Time pips at 2030 and into SS. (Watts, KY) **15385** in SS at 0145. (Newbury, NE) ID and EE at 0500. (Smith, WA) **17560** in AA at 2035 and **21700** in SS at 1804. //21610. (MacKenzie, CA)

**SRI LANKA** — Sri Lanka Broadcasting Corp., **11905** at 1457 with traditional sounding music. (Foss, Philippines) VOA relay, **9785** at 1743, //9770 and **9550**. (MacKenzie, CA) **15305** at 2228 with web promo mention. **15545** at 2059 closing in AA. (Brossell, WI) Radio Free Asia, **12015** at 0056 in unid. language. "This is Radio Free Asia" at 0058. (Foss, Philippines)

**SOUTH KOREA** — Radio Korea Int'l. **7285** at 1157 with long sign on in KK and EE. Chimes, IS and into KK. (Becker, WA) **13670** closing at 1359. (Barton, AZ) **15575** in KK at 2305. Jammed! (MacKenzie, CA) 0220 with music, news items, "Let's Learn Korean." (Burrow, WA)

**SUDAN** — Republic of Sudan Radio, **7200** in AA at 0335. (Brossell, WI)

**SURINAM** — Radio Apinte, **4991** at 0356 with continuous pop rock and ID between selections at 0410. (D'Angelo, PA)

**SWAZILAND** — Trans World Radio, **3240** at 0319 with sermon in unid. language, vocal and EE IDD at 0330. Group singing and talk until music box IS at 0345 closedown. (D'Angelo, PA)

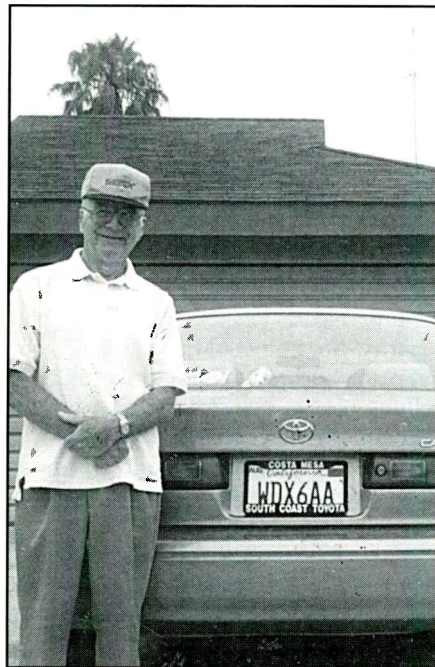
**SWEDEN** — Radio Sweden, **15495** at 1230 in Swedish. (Northrup, MO)

**SWITZERLAND** — Swiss Radio Int'l, **9575** via Singapore at 1430 with ID, reports of money laundering in Swiss banks. (Foss, Philippines) **9885** at 0240 with sports and features. (Newbury, NE) 0433 with ID, news. (Smith, WA) **11905** via French Guiana with news reports at 2216. (Brossell, WI) **17580** with news reports at 2040. (MacKenzie, CA)

**SYRIA** — Radio Damascus, **12085** at 2308 with SS anmts, AA music. (Brossell, WI)

**TANZANIA** — Radio Tanzania, **5010.1** on phone in unid. language at 0339. (Paszkievicz, WI)

**TAIWAN** — Radio Taipei Int'l, **7130** in JJ at 1154. (Becker, WA) **5950//9680** via WYFR at 0231. (Burrow, WA) **9690** via WYFR and woman with comments. Jammed by CC folk music. (MacKenzie, CA) Voice of Asia, **7445** in CC with soft tunes at 1234. (Foss,



*Here's well-known DXer and logging reporter Stewart MacKenzie of Huntington Beach, CA.*

Philippines) **9280** tentative in CC at 0940. (Barton, AZ)

**THAILAND** — Radio Thailand, **7260** at 1100 sign-on over Vanuatu with EE ID "Radio Thailand World Service" at 1101 and into VV program. Another EE ID at 1115 and into Cambodian. (D'Angelo, PA) **15395** at 0303 with Thai and international news. (Burrow, WA) VOA relay, **7260** at 1215, into unid. language at 1218. (Brossell, WI) **9550** at 1720, //9770, **9785**. (MacKenzie, CA)

**TURKEY** — Voice of Turkey, **11845** at 2248 with "That concludes our broadcast from the Voice of Turkey," mention of frequencies and off. (Brossell, WI) **11885** in TT at 0056. (Miller, WA)

**TUNISIA** — RTT Tunisienne, **7110** in AA at 0426, //7275, **12005**. (MacKenzie, CA) **7275** at 0505. (Newbury, NE) **9720** in AA at 0330. (Brossell, WI) **12005** in AA at 0200. "Huna Tunis." (Paszkievicz, WI)

**UKRAINE** — Radio Ukraine Int'l, **12040** at 0320 with news, ID 0320. (MacKenzie, CA) 0327. (Newbury, NE) **15530** in SS at 2049. (Brossell, WI)

**UNITED ARAB EMIRATES** — UAE Radio, Dubai, **12005** at 0328 with drama in AA. (MacKenzie, CA) **13675** at 0300 in AA. EE at 0330 to sudden close at 0347, //15400 and **12005** which had moderate QRM from presumed Tunisia. (Silvi, OH) **15315** with Holy Koran at 1507. (Brossell, WI) **15395** in EE at **1330**, //21605, **13675**. EE also noted on 15395. (Alexander, PA)

**UNITED STATES** — WFJP, Ft. Pierce, FL transmission feed on **26474** at 1706 with commercials. (Montgomery, PA) WFLA,

Florida, **25870** transmission feed at 1655 with Rush Limbaugh program, ID as "970 WFLA at 1700, 1701, 1702 during news. (Montgomery, PA)

**UZBEKISTAN** — Radio Netherlands relay, **12075** at 1449. (Foss, Philippines)

**VANUATU** — Radio Vanuatu, **7260** at 1054 with romantic vocals, some talk, choral selections to ID and sign-off announcements and orchestral national anthem. Poor to fair and in the clear until Thailand opened at 1100. (D'Angelo, PA)

**VATICAN** — Vatican Radio, **7305** at 0146 in SS. (Wilden, IN) **9605** at 0214, ID in SS. (Newbury, NE) **11830** in CC, ID, address in Taiwan, hymn and IS. (Paszkievicz, WI) **12055** via Irkutsk at 0040 in Hindi, EE at 0140 and off 0159. //9650. (MacKenzie, CA) 0148. (Newbury, NE) 0240. At 0255 "You are tuned to Vatican Radio, transmitting to South Asia." (Brossell, WI) **13765** at 1450 opening. (Barton, AZ)

**VIETNAM** — Voice of Vietnam, **9525** via Canada with ID and news at 0230. (Burrow, WA) **9795** via Canada at 0357 sign-off. (Smith, WA) **12020** at 1005 in EE. Down to **12019.5** by 1030. (Montgomery, PA) 2255 with VV vocals. (Foss, Philippines)

**VENEZUELA** — YVTO time station, **5010** at 2336 off frequency or maybe changed. ID as Caracas, Venezuela at 2338. (Montgomery, PA) 0207 with time pips, ID every minute. One night noted switching between **5010** and **5030**. (Alexander, PA) Ecos del Torbes, **4980**, 0130 with nice Latin music, terrific full ID and frequency info in EE. (unknown) 0310 and 0951 in SS. (Jeffery, NY) 1030 with several SS IDs. (Becker, WA)

**ZAMBIA** — Christian Voice, **4965** at 0240 with contemporary Christian music, short EE religious messages, ID. Off 0301. (Alexander, PA) Zambian Broadcasting Corp., **6165** at 0240 with bird IS and ID in various languages including EE, into possible newscast. (Linonis, PA)

Stand at attention and throw a fervent salute to the following folks this month: Brian Alexander, Mechanicsburg, PA; Mike Miller, Issaquah, WA; Richard D'Angelo, Wyomissing, PA; Lee Silvi, Mentor, OH; Ed Newbury, Kimball, NE; Marty Foss, Guinayangan, the Philippines; R.C. Watts, Louisville, KY; Sue Wilden, Noblesville, IN; Robert Montgomery, Levittown, PA; Stewart MacKenzie, Huntington Beach, CA; Jack Linonis, West Chester, PA; Dave Jeffery, Niagara Falls, NY; Rick Barton, Phoenix, AZ; Robert Brossell, Pewaukee, WI; Adam Smith, Federal Way, WA; Sheryl Paszkievicz, Manitowoc, WI and Bruce Burrow, Snoqualmie, WA. Thanks to each one of you!

Until next time, good listening! ■



## Tuning In (from page 4)

something is very wrong, indeed!) Beyond search and rescue comms and certain other HF comms, if Uncle wants it encrypted, he does so and all we would hear is white noise. It sounds like your scanner's squelch fully opened. Not terrible exciting, or revealing is it?

While it's my firm belief — again, backed up by a few years' experience, and personally knowing military and civilians responsible for real secure comms — that our rudimentary monitoring, while captivating and certainly real-time, is to monitoring our Nation's secrets as today's GMRS and ham radio is to communications on a planet far away whose inhabitants stopped using jet aircraft and cars 1,000 years ago. Having said all this, though, let's not kid ourselves. We Americans toss around without much thought one way or another. It's just the way we are. We're too open. You can learn more about your new neighbor by just standing there listening to them talk — without a cordless phone, mind you — for five minutes than you really should. You'll learn where the kids go to school, their names, ages, where the father (or mom) works, how he or she gets to work (including the times of departure and precise route) and a ton of personal information, that, when pieced together, provides one heck of a good picture of their life. If you're on the side of Barbarian bin Laden, you've got it made without even trying.

During my military career I found it particularly disturbing to hear not just military family members, but soldiers as well, talking about deployment plans inside German restaurants, on-post Burger King™ and at the airports. Folks would also routinely toss out government phone books and staff memos. Were they classified documents? No. But they were potentially revealing parts of a bigger puzzle to would-be terrorists. During the Gulf War, our unit, which was responsible for supplying our troops fighting Saddam with fuel and ammo, was using off-the-shelf VHF two-way handheld radios. Oh boy, the leaders there (if you wish to call them that) developed their own backyard security plan. The First Sergeant was known as "Poundcake" — a cute handle taken because of his far too many trips to the mess tent. There were others — too ridiculous to mention, and because I don't want to take another Pepto

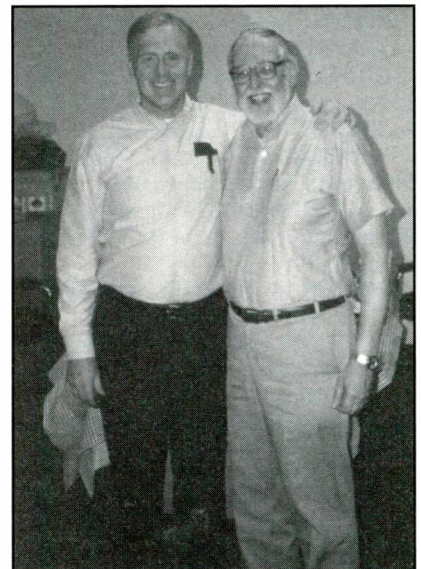
this morning — but suffice it to say, these comms within our unit were conducted in the clear, on a 72 MHz FM frequency that traveled line-of-sight well into enemy territory. I suppose one could argue that these clowns were only coordinating our next morning meeting or babbling that the stakes on tent "x" weren't properly secured into the sand, but the bigger picture would seem to be the general lack of common sense when it came to comm security. So, you could even ponder our not being allowed to monitor cordless or cellular phones because there's a law on the books that says so, and the all-too-frequent comm blunders made by those trusted with our Nation's security, wherever they're located.

We've established that as radio hobbyists we're not necessarily at the cutting edge of communications security as some in our fold would have you believe. To say that now is the time we should stop providing frequencies, reception information and basic details of what we're hearing is like saying someone or some group might turn that information into a dastardly plan and target the World Trade Center and Pentagon. Frankly, it's a little late — in many aspects — for hindsight thinking. We will, however, be taking a closer look at *how* we report information in our columns, especially when it comes to HF utility monitoring. This has less to do with the frequencies, but more with the reporting of transmission *details* as Joe Cooper discusses this month in his column.

Today's enemy is probably more sophisticated than during the Cold War; money talks, and there's no such thing as "the lowest bidder." If they want to monitor those encrypted satellite comms, chances are they do. They probably also have brand new R8Bs or top-of-the-line scanners array in their comm arsenal. And just like Willie won't be frightened by anti-monitoring laws if he's hell-bent on stealing your new car, these screw-loose fanatics get what they want not from us, *Pop'Comm*, *Monitoring Times*, club publications or our your postings on the various newsgroups. Are we making it easier for these people by providing details of what we hear on the HF utility frequencies and in our scanner monitoring? While I obviously can't prove it, I seriously doubt it. I'd never jeopardize the lives of our servicemen and women, or Americans at home or abroad by giving out sensitive or detailed monitoring

information in the pages of this magazine or on our Website. Please don't argue that if we give out *any* frequency information it's potentially damaging. Long before *Pop'Comm* and certainly during equally trying times, other publications, in America and overseas, were monitoring the VHF, UHF, and HF spectrum and talking about their finds openly. To think we hold the missing piece of the radio puzzle for our enemies is a lot like thinking our name is James Bond.

If we really want to help our fellow Americans and public safety professionals, report suspicious activity you see in your hometown or when traveling. Now isn't the time to think someone else will report it, it's time to act, but responsibly and fairly. Start a neighborhood or community watch program that uses GMRS, ham, or CB transceivers — and scanners to monitor the police dispatch frequency. Now is the time to reach out to your police and fire professionals as that extra set of eyes and ears they so desperately need. Please remember, though, we're not CIA or NSA employees, and Rambo and Bond *are* fictional movie characters. ■



Don Allen, W9CW (left) and Richard Ross, K2MGA at Don's recent farewell luncheon at CQ's headquarters in Hicksville, New York.

Don worked as *Pop'Comm's* advertising manager for 12 years. Thanks, Don — you'll be missed!



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

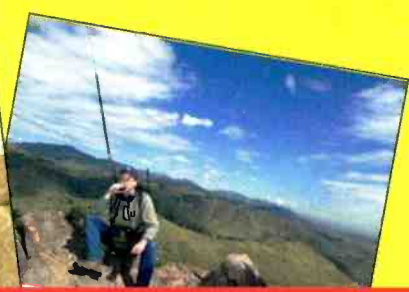
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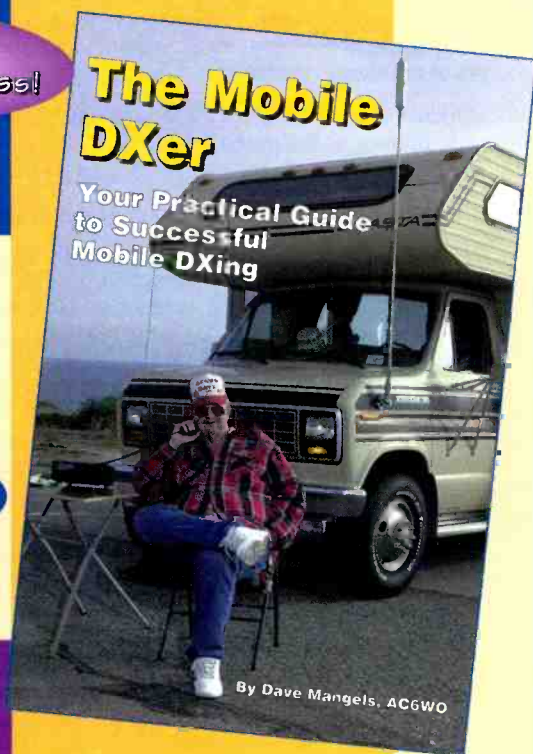
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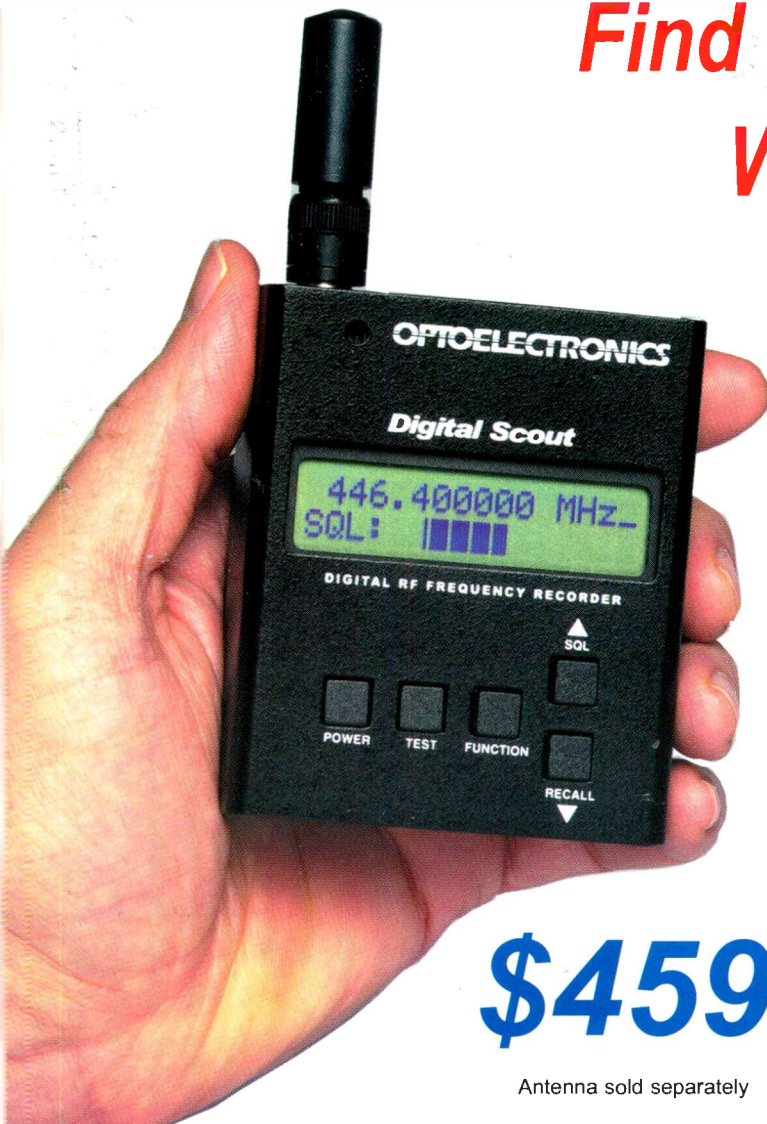
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