Medical Emergency! Tuning in the EMT's

- DXing Mexico
- Probing the Secrets of Nellis Air Force Base
- Scanning for Poachers
You Have Counted on Us for 15 Years

You have counted on OPTOELECTRONICS Hand Held Frequency Counters to be the best quality, to be affordable and reliable. We have been there for you with Frequency Counters that are compact and ultra sensitive. And more and more of you are counting on us, technicians, engineers, law enforcement officers, private investigators, two-way radio operators, scanner hobbyists, and amateur radio operators, just to name a few.

Hand Held Series Frequency Counters and Instruments

<table>
<thead>
<tr>
<th>MODEL</th>
<th>2210</th>
<th>1300H/A</th>
<th>2400H</th>
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<td>NA</td>
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Monitoring Emergency Medical Services by John Norton

Police and fire are only part of the story your scanner can tell. By punching in a few additional frequencies, you can tune in the rest of the story, the exciting world of Emergency Medical Services.

John Norton profiles one such system and in the process tells you what you can expect to hear and how to tune it in. From ambulance to emergency ward, it's genuinely gripping human drama.

MS monitoring is exciting, says John, so much so that many who have started out by monitoring EMS actually end up joining their local First Aid or Rescue Squad.

Motorola

Shortwave from Meh-hee-ko by Charles Sorrell

A Mexican DX Standoff: Shortwave radio in Mexico is a "smoke 'em if ya got 'em" kind of affair. Officials there impose few demands on the stations, requiring their owners only to light up the transmitters from time to time in order to keep their license.

As a result, DXing Mexicans on shortwave is a lot like shooting ducks at a carnival sideshow. The ducks pop up unpredictably then disappear again. If you're alert enough, though, you may be able to knock a couple down and win the kewpie doll.

Exploring Nellis Air Force Base by Steve Douglass

The first time most folks heard of Tonopah, Nevada, was when the Air Force first revealed the existence of the Stealth bomber. Up until that time, the town was known for little more than the heat, rattlesnakes and Nellis Air Force Base.

Now, it turns out, Nellis is home to all kinds of strange creatures. There's the F-117A Nighthawk, a stealth fighter that with its swept back wings and twin tail resembles some evil black swallow. There's even a secret wing of captured Soviet fighters.

Join Steve Douglass as he uses his radio to explore the strange, futuristic world of the Nellis military operations area.

Scanning for Poachers by Bob Kay

Even game poaching becomes hi-tech when the potential reward can be in the thousands of dollars! Game wardens accordingly have had to scramble for new protection techniques. Bob Kay tells you where to tune your scanner as the action heats up this season.

COVER PHOTO courtesy of Motorola
Bob Kay on the Loose

If you're too shy to ask old Aunt Tillie for a PRO-2005 this Christmas, don't worry. Bob Kay will do the asking for you. As a matter of fact, Kay -- a person who has never been accused of being shy -- has taken the liberty of preparing your Christmas list for you.

We realize that this is quite a change for Bob. Regular readers will no doubt remember last year's Christmas piece, a sad little story about a dog that some described as one of the most pathetic tear-jerkers ever written in a radio magazine.

Still, if you're the kind of person who believes that it is far better to receive than to give, then you'll find Kay's Christmas gift list a true holiday blessing. So c'mon. Read the Scanner Report and get in the spirit of a Bob Kay Christmas.

And Much More...

This month, aero columnist Jean Baker introduces the 118.000 through 135.975 MHz aero band. There's plenty to monitor, from routine Air Route Traffic Control to international distress frequencies, and a lot of radios can pick up these frequencies.

Federal File starts out: "If you live close to a major river, lake, or along the U.S. coastline, you are probably within scanner range of the exciting communications of the United States Coast Guard." Check it out.

Do a lot of traveling? Larry Magne takes a look at the globetrotter's friend -- the Grundig Yacht Boy 230. This compact little portable will keep track of local and universal time and will cover almost any band you care to listen to.

Bob Grove does a hands-on review of the Realistic PRO-2024 no-frills desktop scanner. He also introduces a nifty accessory module for the PRO-2004/5 that automatically searches and stores active frequencies.

If you really want to beam that signal in, take a gander at Antenna Topics. And for more projects and tips, "Read on, Brother!"

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DEPARTMENTS

| Letters | 3 |
| Communications | 4 |
| Shortwave Broadcasting | 24 |
| Utility World | 28 |
| The Scanning Report | 32 |
| What's New? | 36 |
| Uncle Skip's Corner | 38 |
| The Federal File | 40 |
| Plane Talk | 42 |
| On the Ham Bands | 44 |
| The QSL Report | 46 |
| Reading RTTY | 47 |
| Satellite TV | 48 |
| American Bandscan | 50 |
| Outer Limits | 52 |
| Below 500 kHz | 54 |
| Program Guide | 56 |
| Frequency Section | 65 |
| Magne Tests ... | 86 |
| Scanner Equipment | 88 |
| Catalogs | 90 |
| DeMaw's Workbench | 92 |
| Experimenter's Workshop | 94 |
| Antenna Topics | 96 |
| Ask Bob | 98 |
| Convention Calendar | 101 |
| Stock Exchange | 102 |
LETTERS

Joe MacKenzie writes to tell us that we’re “way off base” in the article that profiled Austrian Radio in the October Monitoring Times. In that issue the author wrote, “On a friendliness scale of 0 to 10, Radio Austria must rank as at least a 9.” That, says Mr. MacKenzie, is “hogwash.”

“There are several stations on the shortwave dial that are so consistently ignorant as Radio Austria,” continues Mr. MacKenzie. “Sure, ask them for a schedule and you’ll have the same 50-50 chance of getting one from them as you do from any other station. But go beyond that -- ask a question about the station, a program, even their country, and their average drops to an unwavering zero.

“I realize that you’ve got to put a happy face on the shortwave industry. But don’t get carried away. Stretching of the truth like that can strain your credibility.”

The truth is that I also choked on that line when I saw it. “He’s got to be kidding,” I thought. Radio Tirana Albania is more outgoing than the English department of Radio Austria.

The line was about to get zapped out of the text and replaced with a bit of sharp edged truth when the thought hit me. If author Bill Pell says that they’re friendly, they must be. Pell has got some 30 years of DXing under his belt. Maybe they really are a friendly station. Maybe it’s only a coincidence that they have ignored my pleas for help in promoting their station in the pages of this magazine for the past seven years. Maybe they never got all those letters. Or the international telexes. Maybe they were just...

No, that’s no coincidence. These people really are ignorant. And yes, Joe, I should have hit Radio Austria International between the eyes with the truth. I was going to change the offending line to read, “On a snobbishness scale of 0 to 10, Radio Austria rings the bell at 10.” I should have.

Bill Edwards and other sharp-eyed readers caught an error in our explanation in last month’s column of how Fred Doyle was hearing 46 MHz cordless telephone base units in the 15.5 MHz region of his shortwave receiver.

All cordless telephones operate on the same principle: A crystal oscillator is modulated by the voice; a multiplier then raises that original signal -- the fundamental -- to some desired whole-number multiple (in this case the third harmonic) which is amplified and fed to an antenna.

Fred was not hearing the intentional 46 MHz harmonic; most likely he was tuned to the fundamental oscillator frequency of the nearby cordless phone.

“If any of you get the chance to travel through Asia,” writes Hugh Waters of Orchard Point in Singapore, “consider a stopover in Sri Lanka to visit Victor Goonetilleke.”

Goonetilleke is one of Asia’s leading clandestine and tropical bands DXers.

“Victor has just completed his [new] house in Piliyandala (Colombo) and even has a guest room, available for transmitting hams and DXers. Leave him ten dollars per night and you can tap into one of his longwires, strung high between the coconut tree, amidst spice gardens.

“A visit to Victor’s shack will give you a chance to see how great DXing results are made using mediocre, often antique, receivers. Anyone wishing to visit Victor should write or phone a few weeks in advance to find out what radio components are in short supply there. And don’t worry. Although Sri Lanka is enmeshed in a bloody civil war, none of the violence has ever been directed against tourists!”

Hugh says that you can ring Victor up -- although we haven’t heard directly from Victor on this -- at 504 098. And don’t worry a second about that bloody civil war.

Brian Jones of San Antonio, Texas, writes to say that sometimes, Monitoring Times treats non-ham readers like they “have to have mental baby food.” Specifically, Brian is commenting on the introductory ham bands article in the September issue.

“And what about the article on short-wire antennas? The sum total is to take a wire and hook it onto your receiver. Come on! I’m not a moron!” I’m certain you’re not a moron, Brian.

However, keep in mind that there are other readers out there that are beginners. And no, that doesn’t make them morons, either. But they do need basic information, the kind which was found in Mr. Small’s article.

[How to find a helping ham, MT makes Consumer Reports, and much more on page 100]

A long, long time ago, Mike Hotchkiss was kind enough to drop us a line. Mark is a new shortwave listener -- or was, back when he wrote the letter. In any case, Mike lives in the Fort Collins, Colorado, area and took the time to snap a shot of WWV, which we here-with reproduce for your enjoyment.
Stodgy and Boring Programs

Changes in the Soviet Union are making life tough for the Voice of America. According to the New York Times, when VOA director Bruce Gelb met with Soviet officials in Moscow last month, he heard "not one...complaint about the VOA."

He did, however, get an earful from Soviet dissidents, who told him that VOA programs were "stodgy and boring." Some Baltic-Americans are claiming the radio voice of the U.S. government is going too far in its efforts to avoid being seen as provocateurs. Ojars E. Kalnins, a spokesman for the American Latvian Association who just returned from a trip to the republic, says that listeners there complained that the programs carried "too many extraneous fluff-type stories" about life in America.

Some 29 percent of the "adult, urban, educated population of the Baltic republics" tunes into the Voice of America in an average week.

Habla Usted el Espanol del Ham?

Radioscan is a new monthly Spanish language ham magazine published in Miami, Florida. Recent issues have carried ads from AEA, the ARRL, Grove, Heath, Kenwood, and ICOM. A one year subscription is $19.95. For more information, write 175 Fountainebleau Blvd., #2K-5, Miami, Florida 33172.

FCC Puts Pirate to the Mat

Radio equipment used by the Brooklyn, New York, pirate radio station WHOT has been seized by the U.S. government. The seizure was the first case to make use of Federal civil forfeiture provisions to shut down an unlicensed radio station. According to an FCC press release, the station operated on weekends between midnight and 7:00 am.

Investigators located the station using mobile direction finding equipment. The operators could face a fine of up to $100,000 and/or one year in prison. (via W5YI)

Having a Gay Old Time

Lambda Amateur Radio could be one of the fastest-growing organizations in ham radio. According to president Jim Kelly, the organization, which is comprised of gay and lesbian amateurs, has experienced a 60 percent increase in membership.

Lambda Amateur Radio was first formed in 1975 when a gay U.S. ham advertised in a national publication seeking to meet other gays and lesbians with an interest in ham radio. One of the organization's purposes is to recruit more gays and lesbians into the amateur radio service. (WSYI)

Shaking Up Complacency

It seemed like it was only hours after the Loma Prieta Earthquake struck California that we began hearing from our west coast readers. Several days more passed and the letters began to come in.

Some readers, like Art Blair of San Francisco, threatened to leave the area. "One more [like this one] and back to Boston we go!" Others, like Ken Melrose of Oakland, seemed amazed to be alive. But virtually all expressed disappointment over the performance of their radio gear during an actual emergency.

On such an occasion, radio equipment could literally mean the difference between life and death -- at least provide comforting information on what is going on. At that point, radio ceases to be a hobby and becomes something entirely different. Are you really prepared?

We reprint, in its entirety, a letter from one reader. The points are well taken. We hope to explore them in more depth in a future issue.
Gentlemen:

I have some suggestions and information that might be useful. It's the day after the big San Francisco/Bay Area earthquake. I just can't believe it. We are used to earthquakes out here but nobody could believe the strength of this one.

My power has been between 55 and 65 volts for the first seven or eight hours. Then it went up to 100 volts for another ten hours until finally, the power company took us down, then brought it back up to normal at 120 volts.

All of my battery operated equipment, scanners, AM/FM portables, and flashlights, worked fine until the batteries wore out. But then what? I had a large Gel-Cell 12v battery but how was I going to recharge the ni-cad battery pack in my scanner? My portable radios were AC or battery operated and didn't have 12v DC inputs. I was offered the use of a TV set, battery operated or AC, but it took 9 D cells. Just great. I counted 4 Ds in one flashlight and two in each of the others but I was still one short! And did I really want to disable my lights?

What did I learn from this?

1) The one thing I could have used most was a light (under 20 lbs) battery supply that connected to a car battery (via clamp or cigarette lighter plug) that offered taps at 3v, 4.5v, 6v and 9v. I have a new truck (six weeks old) without a cigarette lighter outlet. It won't be that way for long.

2) All radio/communications gear purchased from now on will have to be capable of 120v and battery operation and also have a jack for external power input.

3) Scanners using rechargeable nicads also need to have battery cases that hold disposable cells. Those with slide-on packs need an adapter plate with cord that slides on the bottom to feed it external power. (Many 2 meter walkie-talkies have this option.)

4) Any gear -- radio, flashlight, etc. -- using more than 4 cells is not advisable in an emergency since supplies of batteries disappear fast.

You know, the two things that were the most useful during those hours were a small Sony AM radio and my mini-mag penlight. Both use two AA cells and both were small enough to go in my pocket, leaving my hands free.

It has been very therapeutic writing this. We continue to experience aftershocks. The stress has been very nerve wracking.

Pass the word that 95% of us and our property are OK. I just hope that some of this information is of help, although I have a feeling the hurricane Hugo might already have driven these same points home to others.

Sincerely,

Greg Reid
Sometimes the real excitement in an emergency may not be on police channels, but on the EMS frequencies like this Paramedic Dispatch Center in Hackensack, New Jersey.

Additionally, monitoring your local EMS can also fill in the missing link in a communication chain. For example, when listening to the police tend to a major motor vehicle accident, the interesting communication may not be found on the police frequencies but on the EMS frequencies. While the police are deciding on traffic control assignments, you could be monitoring the treatment and condition of patients in the back of the ambulance!

Here is how the system typically works in the state of New Jersey:

While the large urban areas of the Garden State are served by paid ambulance services, most of the suburban and rural areas of the state are served by Volunteer First Aid or Rescue Squads.

### Monitoring the World of EMERGENCY MEDICAL SERVICES

by John Norton, MICP

Many monitoring enthusiasts enjoy listening to police and fire services. However, few individuals take the time to listen to Emergency Medical Services (EMS).

This aspect of the hobby can provide many hours of listening enjoyment, particularly for those with an interest in medicine. But even if you do not have a medical background, much of the communication is of a nontechnical nature that can be easily understood by the monitoring enthusiast.

These squads are typically composed of individuals trained as EMTs or Emergency Medical Technicians.

EMTs are graduates of a training program which is state sponsored and runs for approximately 120 hours. EMTs are trained to respond to the scene of an accident or illness and provide immediate first aid until more definitive care can be reached.

EMTs are typically composed of individuals trained as EMTs or Emergency Medical Technicians.

EMTs are graduates of a training program which is state sponsored and runs for approximately 120 hours. EMTs are trained to respond to the scene of an accident or illness and provide immediate first aid until more definitive care can be reached.

Paramedics are equipped to administer medication and perform treatments generally performed only in the emergency room.
This care includes bandaging of wounds, splinting and immobilization of fractures and suspected fractures as well as routine care and treatment of medical emergencies such as poisoning, fainting, and so forth. They are also prepared to administer oxygen to the victim of a heart attack or shortness of breath and in the case of cardiac arrest, to perform CPR (cardiopulmonary resuscitation). EMTs can also apply MAST (Military Anti-shock Trousers) in certain cases involving severe blood loss or low blood pressure.

In the town of Maplewood, when a person in need of an ambulance calls the local police department, the on-duty crew of the Maplewood First Aid Squad is paged. The on-duty crew typically wear small Motorola "pectron" pagers which look like oversized personal pagers. When activated, these "pectrons" emit a series of alert tones followed by a voice message from the Maplewood Police Department dispatcher asking the crew members to report to their building for a call and describing the nature of the emergency.

When the squad members reach their building, they enter the ambulance and immediately notify police headquarters on 154.815 MHz (Maplewood Police dispatch frequency) that they are on route to the scene of the emergency. At this point, the police dispatcher provides the squad with a repeat of the address and any update on the condition of the patient if the police have already arrived.

If the patient's condition is not "critical" and paramedics are not required, listen to 155.340 (known as the "HEAR" frequency) and you will be able to hear the First Aid Squad call the hospital to alert them that they are approaching the hospital with a patient. You will normally hear the squad member give a report over this frequency to the hospital on the condition of the patient.

If the nature of the emergency is such that the life of the patient may be in danger, the police will simultaneously request the dispatch of a Mobile Intensive Care Unit or MICU. MICUs, in New Jersey, are based in hospitals and consist of two Mobile Intensive Care Unit paramedics who respond directly from the hospital to the scene of the emergency in a specially adapted vehicle such as a Chevrolet Suburban or Ford Bronco.

These vehicles permit rapid response in a variety of weather conditions which might require four wheel drive capability. Paramedics on these units are trained to administer what is called ALS or Advanced Life Support. This includes the administration of life saving medication.

Paramedics are also equipped to monitor cardiac rhythms and provide other life saving treatments that are typically performed only in the emergency room, such as defibrillation and endotracheal intubation. In essence, paramedics bring the "emerg-
gency room" to the patient. In many cases, the savings in time can spell the difference between life and death.

Paramedic units are dispatched from a centrally located hospital dispatch center on 155.175 MHz. By monitoring this frequency, you will be able to hear the electron tones, as the paramedics are being dispatched, the address to which the paramedics are being dispatched, as well as the nature of the emergency.

If you listen carefully to this channel, you might also be able to hear the paramedic dispatcher update the medics on the condition of the patient or discuss with the medics the need for a 'Medevac' type helicopter to quickly evacuate the patient from the scene. The medics also use this channel to advise the dispatch center when they reach the scene of the emergency as well as the destination hospital when they depart the scene with the ambulance.

When the paramedics reach the scene of the emergency, they notify the local police department of their arrival on the appropriate police frequency and then request that the paramedic dispatcher provide them with an appropriate "Med" channel.

This "Med" channel is one of eight paired UHF frequencies which permit the paramedic to be in direct contact with the emergency room physician from wherever the paramedic may be. The paramedic carries with him a Motorola "APCOR" radio for communications with the physician in the hospital on the assigned "Med" channel.

As we mentioned before, each "Med" channel consists of two separate but paired frequencies. One frequency is for transmission between the paramedic unit and the hospital emergency room and the other is for transmission between the hospital and the paramedic unit.

If you take the time to listen to these frequencies, you will hear the paramedic provide a detailed report to the physician on the medical condition of the patient. If it is a traumatic injury, the paramedic will describe to the physician the "mechanism of injury" or how the patient was injured.

After "report" by the paramedic, you will hear the paramedic say that he or she is sending an EKG. The EKG is then sent over the same UHF channel. The special "Apcor" used by the paramedics splits the channel so that both voice and EKG can be transmitted to the physician at the receiving hospital.

Unless you own special decoding equipment, you will not be able to see the EKG but you will be able to hear the voice transmission as well as a high-pitched tone which is the EKG transmission. The "Apcor" looks like a small white box with a telephone handset.

The paramedics bring the "Apcor" directly to where the patient is located, typically transmitting with a power output of approximately one watt (although higher power 12 watt units are available. The power need not be high because it only has to reach the paramedic truck.)

The paramedic truck contains a traditional "repeater" of one hundred watts or more. This repeater, with higher power, "retransmits" the signal directly to the central paramedic dispatch center which in turn routes the signal over traditional telephone lines to the base physician in the hospital emergency room.

In some areas this UHF system of telemetry is being replaced by specially designed cellular telephone technology capable of transmitting both voice and EKG. However, cellular technology is presently being utilized only in the more urban areas of the state where there are enough "cells" to provide consistently reliable coverage. Also, any cellular system must be capable of assigning a priority to the emergency call so that paramedics are always assured of getting an open cell.

After the physician has received the voice report and seen the EKG, the physician will tell the paramedics what treatment he wants administered to the patient. This could be the starting of an "IV" of "D5/W" or the administration of powerful cardiac or pain-killing medication.

But don't give up listening after you have heard the physician give his "orders"! There is more to be heard as the patient is transported to the hospital. The paramedics will typically "update" the physician enroute to the hospital on any changes in the status of the patient. You may even hear the physician order additional treatment.

The "MED" channels described for paramedic to hospital communication are:

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<tr>
<td>8</td>
<td>463.175</td>
<td>468.175</td>
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</table>

Many who have started out by monitoring EMS frequencies have later gone on to join their local First Aid or Rescue Squad and become part of the action.

Pleasant listening!

Patient being treated by paramedic. Paramedic is using "Apcor" to contact base physician.
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Surveys taken in American high schools and colleges reveal that a frightening percentage of students can't locate Mexico on a map. They think it's in Africa or is an island somewhere, or maybe it's just a type of spicy food.

There's no excuse for this kind of geographic ignorance. But from a shortwave radio angle, Mexico can still fool you. Finding Mexican broadcasters on shortwave can be more difficult than you might first imagine. It may be right next door but it's no snap to hear the "meh-he-kan" stations on shortwave.

DXing the Mexican shortwavers is a game played with some footnotes to the rules. Take any recent edition of the World Radio TV Handbook and you'll find a dozen or so shortwave stations listed under Mexico. The listings don't change much from year to year. Sit down at your receiver tonight and try and tune them all in, however, and failure is guaranteed--simply because a lot of them won't be there.

Communications law in Mexico doesn't lay heavy burdens on broadcasters who have shortwave licenses and wish to retain the privilege. It is only required to have the thing on the air a few days out of the year in order to retain the license. So many of the licensees do just that, the minimum. The rest of the time they are unenthusiastic about shortwave. One wonders why they bother at all.

There's an element of chance in the Mexican DX game. This is no radio shooting gallery where you simply knock over the targets as they roll past. This is more like a game of hide and seek. And that, of course, makes it more fun.

If you are ready, we'll see if we can help you flush out some of these stations and get your Mexican log filled as far as it's possible to fill it. Keep in mind that all of the stations, even those which operate fairly consistently, tend to go through periods of inactivity. So it's important not only to check regularly those you need but to keep an eye open for news about reactivations of those you need and respond quickly to that information. All the broadcasts are in Spanish.

the listener is often confronted with overlapping layers of interference, making it very difficult to trap a signal from this 500 watter.

The best first step would be to determine when, during the station's scheduled activity periods, the QRM from 5980 and 5985 kHz is at its low point. A communications receiver with plenty of filtering flexibility will be a big help here as well. XEUJ is a friendly station which appreciates reports. They go to Apartado 62, 6700 Linares, Nuevo Leon.

Radio Mil

6010 and Mexico City are home to this one which, like a number of the Mexican shortwave stations, has been around since the 1940s or earlier. It is listed for 250 watts, operating from 1200 to 0800 and seems to be active on a reasonably regular basis, perhaps 40 to 50 percent of the time.

This is another QRM-filled area so your best chance at reception may be at sign-off when frequency usage by other stations is likely to be low. Reception reports should be sent to Insurgentes Sur 1870, 01030 Mexico DF.

El Eco de Sotavento

... on 6020 has, more recently, been using the name La Voz de Veracruz. That makes sense since Veracruz is where it's located. Residents there insist "solo Veracruz es bello" (only Veracruz is beautiful). XEUV is active a good part of the time and is scheduled at 1100-0600. The 250 watt transmitter relays XEU on 930 kHz mediumwave. This one is heard fairly often in our local evenings. You can send your reception report to Ocampo 119, 91700 Veracruz, Veracruz.

Radio Tus Panteras

This panther is usually asleep on shortwave. Listed for 6105 with a 1200 to 0600 schedule, XEQM operates from Merida, known as the white city and city of windmills. It's the capital of Yucatan state. XEQM's 450 watt transmitter relays XEMQ-1240 mediumwave (note the reversed call letters). It's not a very good QSLer. Reports often languish at Apartado 217, 97000 Merida, Yucatan.

December 1989
Radio Universidad de Sonora

on 6115 has been fairly active during the past couple of years. XEUDS (Universidad de Sonora) is scheduled from 1500-0230 but is sometimes on beyond that hour. Broadcasts are a relay of XEUS on 850 kHz. The stations are owned by the University of Sonora at Hermosillo which has strong ties to the University of Arizona and Arizona State University. Programs are noncommercial, so you will hear classical music and other cultural programs on this station.

Beware of Radio Union in Peru, listed for 6115 (but often as high as 6117). Reception reports go to Apartado 106, Universidad de Sonora, Hermosillo, Sonora.

La Voz de la America Latina

is another longtime Mexican broadcaster as well as one of Mexico's major stations. The shortwave, XEWW, relays XEW-900 in Mexico City. XEW operates around the clock but, again, the shortwave may not match that. XEWW uses three frequencies: 6165, 9515, and 15160, though not necessarily at the same time. You'll hear IDs for XEW, rather than XEWW. Address is Ayuntamiento 52, 06070 Mexico DF.

Radio Educacion

XERPM on 6185 has also been fairly active in recent months, though, of course, one can't count on that continuing. This is another cultural station, relaying XEEP on 1060 kHz. The station began as a service of Mexico's Ministry of Education, but some reports indicate that it is at least a semi-autonomous operation now.

It is listed with five kilowatts and a 1200-0800 schedule. Late evening checks would seem to offer the best opportunity to hear this one. In the winter months, when 49 meters is open that late, you can also check for it at sign-on. Reports go to: Angel Urraza 622, 03100 Mexico DF.

Radio Mexico Internacional QSLs with a card, letter, schedule and reception report form.
XEUJ in Linares often includes cards advertising Mexican musical artists

La Hora Exacta

is a sort of all talk WWV with beeps marking each fresh minute, day and night. A steady stream of news, messages and commercials doesn’t even make way for the time pulse when it comes. XEQK runs 500 watts and relays 1350 mediumwave, which uses the same call letters. It’s operated by the Mexican Radio Institute. Reception reports go to Margaritas 18 Col. Florida, 01030 Mexico DF.

Radio Unam

XEXQ produced this sticker on the occasion of the station’s 50th birthday. Unfortunately it is seldom found on shortwave.

XEXQ on 9600 is another cultural station. It’s run by the National Autonomous University of Mexico in Mexico City and relays XEUN-860 there. The power of the shortwave outlet of one kilowatt is puny compared to the 50 kW listed for the mediumwave station. Even so, that one kilowatt is often well heard (when it’s active!). The mediumwave schedule is 24 hours a day.

Like the other university station, you can expect to hear a lot of classical music on this station. When the transmitter is lit up, the best chances to hear it will probably be in the evenings (particularly late) and early mornings when fewer of the international blockbusters are in evidence.

Reception reports usually get answers. Reports go to Adolfo Prieto 133, Col. del Valle, Mexico DF.

La "Q" Mexicana

Here’s another one that’s off shortwave as much or more than it’s on. The “Q” comes from the call letters, XEQ on 940 kHz and XEQQ-9680 shortwave, the latter relaying the former using 500 watts. Scheduled for 1200-0600, the station is heard fairly well throughout North America when it is active.

It is a commercial station and often shortens its ID to just “La Q” or simply “Q.” Reports go to the same address as that used by XEWW.

Radio Huayacocotla

This one is about as tough to catch as XEUJ. It runs 300 watts on 2390 from Huayacocotla in Veracruz state. The problem is as much the schedule as it is the low power and frequency. You can largely forget the 1200-1500 morning schedule and concentrate on the tail end of the 2100-0100 schedule. Most North American based listeners will have a shot at this one only in the last hour or so of the schedule.

If the Guatemalan, La Voz de Atitlan, is still active on this same frequency, chances are just as good you’ll hear that one. (The Guatemalan plays lots of marimba music.) Reception reports can be sent to the station at Apartado 13, 92600 Huayacocotla, Veracruz.

The WRTH lists three other Mexican shortwave stations, although nothing has been heard from or about them in quite some time. Still, it may pay to check occasionally for the following: Radio Universidad de Potosina, San Luis de Potosi on 6045 using call letters XEXQ; Musica Romantica, XECMT in Ciudad Mante on 6090, and Radio La Jorocha, XEFT, in Veracruz on 9545.

These targets, the Mexicans, belie the belief that good DX has to have plenty of distance involved. More often than not, nearby Mexico offers some very challenging SWBC DXing.

Good luck, and hasta luego!
Looking for a shortwave radio? Passport's Buyer's Guide covers the latest in world band portables and shortwave communications receivers. Dozens of models are rigorously lab tested and evaluated by a panel of experienced listeners. Nothing is held back. Among the new models for 1990 is the best receiver we have ever tested.

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Probing the Secrets of Nellis Air Force Base

by Steve Douglass

If you are ever on Highway 6, just outside of the little town of Tonopah, Nevada, and you can brave the heat, the rattlesnakes, and the isolation of the desert, get out of your car and wait. If you are patient enough you just might be amazed by what you'll see.

At first you'll only hear it, a high-pitched whining sound in the distance. Risking eye damage, you squint into the desert glare trying to locate the source of the sound. Suddenly you'll see it. It's an ominous-looking aircraft, perfectly flat on the bottom, pyramidal on the top.

Roaring across the high desert with its twin tail and swept back wings, it looks like a large black swallow. As it gets closer, you'll feel the urge to duck down among the lizards and the cacti. Such action is meaningless, though, for if you can see it, it can see you. So just stand and watch the Nighthawk go through its paces.

Since the beginning of the year, the F-117A Nighthawk stealth fighter has been engaged in daylight training missions from its secret base in Nevada. Still considered off limits to the press and public, the security forces at the base take a dim view of prying eyes. However, once in a while the Nighthawk must leave its protective nest.

It is on these rare occasions, when the Nighthawk is not surrounded by razor wire, patrolling dogs or security teams, that is when you might catch the F-117A strutting its stuff.

The secret Tonopah base is part of the Nellis Air Force Base military operations area. This secret range, which covers a large portion of south central Nevada, is the home of the Air Force's top secret proving grounds. Edwards Air Force Base was once the premier testing center but now is considered too public to test top secret stealth aircraft. The F-117 base on the northwest corner of Nellis is remote and removed from all but the most determined.

The F-117A Nighthawk is the official name of the stealth fighter but those who fly it have nicknamed it "The Wobbly Goblin." At slow speeds, the fighter is apparently hard to handle, hence, the odd title. Another term for the aircraft is "the sacred airplane" because when people see it for the first time they usually remark "Oh my God!"

A total of 49 are thought to be based on the Tonopah range, also known as Mellon Strip. The secret base, located in Area 30 on the Nellis range, consists of 72 nuclear hardened, specially built hangers for these secret aircraft.

The pilots who fly the F-117 are members of a new elite unit, the 445th Tactical Group. Most of the pilots first flew F-111 Aardvarks or have Wild Weasel experience. The special unit, known as "Team One-Furtim Vigilans" (vigilant by stealth) became operational in 1983.

Because of the secret nature of their missions, the pilots are not allowed to acknowledge to civilian air traffic controllers what type of craft they are flying. If asked, they are to say they are an A-7 Corsair.

Team One squadron is not the only squadron flying strange-looking aircraft on the Tonopah range. The 447th test and

Graphic by Teresa Ligon

Nellis Military Operation Area

Graphic by Teresa Ligon

14 December 1989 MONITORING TIMES
Above: Specially modified A-7 Corsairs are used as trainers for F-117a pilots. The aircraft are outfitted with the same electronic systems as the Stealth fighter and also are modified to fly like one. These Corsairs were seen flying near Roswell, New Mexico.

Right: F-117a pilots must also fly over a thousand hours in the General Dynamics F-111-D like these in formation over New Mexico.

evaluation squadron, the Red Eagles, is based there as well. The Red Eagles fly authentic Soviet fighters. Captured in Afghanistan and turned over to the U.S., Mig 17s, 19s, 21s, 23s, 25s, 27s and Sukhoi Su20 Fighters are flown regularly in Nellis’ Red Flag war games.

Occurring almost every eight weeks, the Red Flag exercises are conducted in much the same way as the Navy’s Top Gun school is used to train USAF pilots in dissimilar air combat tactics. What better way to train than against real Soviet fighters? To add to the realism, the Nellis range even is dotted with real Soviet air defense radars and SAMS (surface to air missiles) to give training pilots the feel of the real thing.

There is yet another secret base located in the middle of Nellis. Groom Lake, in an area called Dreamland, is known to be the test base of the mysterious Aurora and the F-19 stealth fighter. The Aurora, the stealth replacement for the SR-71 Blackbird and the F-19, the stealth replacement for the F-15 Eagle, is said to be flying from the Watertown Strip.

The Air Force has reportedly been testing the two top secret aircraft in Dreamland, Area 51, since 1980. (The SR-71 Blackbird was test flown at Groom Lake in the early sixties in complete secrecy.) Other aircraft likely to be test flown from Dreamland in the near future are prototypes for the ATF (Advanced Tactical Fighter), the Phalanx Dragon, a stealth helicopter killer, and the A-12 (Navy Advanced Tactical Aircraft), a replacement for the A-6 intruder.

Although the bulk of stealth aircraft operations seem to be centered around Nevada, it is said that stealth aircraft have been seen at other bases as well. Last April the USAF said the F-117A would be used at bases nationwide to help integrate the stealth technology within the rest of the Air Force inventory. The F-117A has been seen flying near Yuma, Arizona; Edwards AFB in California, and Kadena AFB in Okinawa.
C5-NB Galaxy's were used to ferry to top secret Aurora aircraft to its secret base at Groom Lake, Nevada.

Recently it was rumored that F-117s are being stationed at the recently reopened Roswell Air Force Base in New Mexico. The Roswell strip was constructed originally for heavy bombers during WWII and Vietnam but closed in the late sixties. Residents of the area report that strange aircraft are once again flying out of the base. The White Sands missile range is not far from Roswell and the F-117A may be using the range to test the stealth cruise missile, General Dynamics AGM-129.

Another black aircraft program by General Dynamics known only as Project 100 is even more secret than all other stealth programs. Little is known about the project except that it is thought to be test flying out of Holloman AFB near Alamagordo, New Mexico, and only at night. A military radio net has been heard on various frequencies in the Holloman area (see frequency list) and it may be the testing of the Project 100 aircraft.

### Monitoring

Trying to monitor the secret air force is nearly as hard as catching a glimpse of them. Best bets are the HF and UHF frequencies of the flight test bases and aircraft manufacturers. Also, a good place to monitor would be SAC and TAC frequencies. Another good place to listen is air traffic control centers near test areas.

So get cracking, heat up your set, and maybe you'll be the first to monitor the top secret Aurora or F-19!

---

**Frequencies**

**Holloman AFB, Alamagordo, New Mexico**

- **Approach**: 324.3 MHz UHF
- **Departure**: 255.9 MHz UHF
- **Holloman flight test net/White Sands**
  - **Primary**: 260.8 MHz UHF
  - **Secondary**: 264.9 MHz UHF
- **Other UHF frequencies monitored**
  - 397.9, 353.6, 364.2, 376.1, 189.4, and 251.1
  - **HF link**: 9.023 MHz USB
  - **SATCOM links mentioned**: 262.925 MHz uplink
    - **297.525 downlink**
- **Call signs heard**: Sierra Papa, Sierra Pete, Ringmaster, Battleship, Guardian Papa, Dark Star, Dark Star Oscar

**Roswell Air Field**, New Mexico

- **Approach**: 239.6 MHz UHF
- **Tower**: 272.7 MHz UHF
- **Military net**
  - **Primary**: 305.6 MHz UHF
  - **Secondary**: 397.9 MHz UHF
- **Other frequencies monitored**: 259.2, 305.6, 348.7

**Nellis AFB, Nevada**

- **Approach**: 279.7 MHz UHF
- **Tower**: 324.3 MHz UHF
- **Ground control**: 275.8 MHz UHF
- **Clearance Delivery**: 289.4 MHz UHF
- **ATIS**: 270.1 MHz UHF
- **Nellis Military Operations Area**
  - **Dreamland base**: 255.8 MHz UHF
  - **Sally corridor**: 343.0 MHz UHF
  - **Groom Lake approach**: 361.3 MHz UHF
  - **Watertown Strip approach**: 297.650 MHz UHF

**Edwards AFB, California**

- **Tower**: 269.9 MHz UHF
- **Edwards command post (Conoform)**: 304.00 MHz UHF
- **Edwards VHF ground control**: 121.8 MHz
- **Edwards approach**: 318.1 MHz UHF
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Scanning for Poachers

by Bob Kay

Christmas was less than two weeks away. Inside their small split level house, Jack’s wife, Susan, was reading by the fireplace. On the table beside her, a scanner was monitoring the state game warden frequencies. The lack of activity was reassuring. If it remained quiet, Jack would be home soon.

Outside, far from the warmth of the fire, tall barren trees were swaying in the numbing wind. High above, the nightly performance of glittering stars had been cancelled by a curtain of clouds.

Surrounded by the sleeping winter forest, Jack was sitting alone, briskly rubbing his hands together and wondering if he should call it a night. Normally, during rifle season, he would have been home by now. But this two hour stake-out had been unusually quiet.

"Owl one, Owl one." The radio suddenly crackled.

Reaching under his jacket, Jack pressed the mike button on his hand-held and whispered, "Owl one, standing by."

"We got company comin' your way." came the reply.

On the nearby road, Jack saw the lights of the approaching pickup truck. From the passenger side of the cab, the narrow beam from a spotlight was piercing through the darkness and illuminating the edge of the woods.

As the truck passed his position, Jack watched as the spotlight located the fake, six point buck that he had positioned in the nearby field. Upon spotting the deer, the truck stopped and the cab door opened. Standing up, Jack adjusted his holster and unsnapped the leather keeper that held the 357 magnum in place.

Suddenly, a rifle shot shattered the night silence. As soon as the shot was fired, state police cars pulled across both ends of the narrow gravel covered road.

Then another shot was fired, followed by another! Radio silence was quickly abandoned. "Owl one, are you ok?"

"I'm ok. Multiple decoy shots, multiple decoy shots." Jack replied.

From ahead and behind the truck, red flashing lights were quickly approaching. Standing to the rear of the truck, Jack positioned himself near the safety of a large tree and identified himself. "State wildlife officer! Everyone out!"

As the two men stepped from the truck, they were quickly surrounded by both state police and state wildlife agents.

Wooden decoys or "plywood venison" is rapidly becoming a very effective method of capturing poachers. At this writing, over 20 states are currently using some sort of decoy program. Many of the remaining states are studying the program and are considering its implementation.

Scanning your state’s decoy program or regulated hunting season can provide for some very exciting listening. Radio operations are usually carried out on the wildlife enforcement and state police frequencies. Generally, when the state police are involved, troopers will utilize handheld units that operate on wildlife enforcement frequencies.

But what about scanning for the actual poachers? Are poachers taking advantage of today’s high tech equipment? Do poachers use two way communications? Can the profits from poaching provide sufficient income to warrant the purchase of radio equipment? And can the scanner enthusiast help to curtail poaching?

The answer to all these questions is a resounding "yes." From the east coast, across the Appalachians to Alaska, poaching in America is big business. A professional poacher can make upwards of $50,000 per week. Sound unbelievable? It’s not. In the far east, one gall bladder from a black bear can sell for several thousand dollars. Closer to home, the poacher can easily sell the hide, meat, and skull of the bear to eager buyers.

Sadly, the black bear is not the only
**Table 1**

Look for poachers between the following frequency ranges:

- 27 MHz (CB band)
- 88 to 108 MHz (FM music band)
- 174 to 216 MHz
- 72 to 76 MHz
- 455 to 456 MHz
- 28.0 to 29.7 MHz

(This is the ten meter HAM band. Some manufacturers have sold handheld units to the general public that operate within this frequency range.)

FM headsets and walkie talkies sometimes operate in the cordless phone frequencies:

- 46.6 to 47.0 MHz
- 49.6 to 50.0 MHz

Finally, don’t overlook the itinerant and business frequencies. Professional poachers have been known to utilize programmable transceivers that are capable of operating on any of the following:

**Itinerant:**  
- 151.625
- 154.570
- 154.600
- 464.500
- 464.550

**Business:**  
- 33.0 to 46.0
- 150.8 to 162.0
- 461.0 to 465.0
- 502.0 to 512.0

In the Far East, one gall bladder from a black bear can sell for several thousand dollars.

An accurate profile of a typical poacher cannot be made. Poachers come from all walks of life. They can be doctors, lawyers, bankers, or the guy next door. Some poachers illegally take game for profit. Others do it on a smaller scale to keep their meat freezers well stocked.

Regardless of the reasons, poaching is a serious crime that is depleting our nation’s wildlife. According to the Pennsylvania Game Commission, legal hunting seasons and regulated bag limits are controlled by a large number of variables. Some of these are the weather, the food supply, the number of previously reported kills, and even “road kills.”

Last year, over 32,000 deer were killed on Pennsylvania’s roadways. This figure does not include the legal kills made during the regular hunting season, nor does it include the thousands of deer that were taken illegally by poachers. But that’s just the tip of the iceberg. Combine these figures with the shrinking natural habitat and it’s a wonder that Pennsylvania even has a regulated deer season!
Researchers Hope to Foil Bear Poachers

Poachers in the North Carolina mountains attempting to tune in black bears on their radio receivers might be in for a surprise.

Unless they have friends at NASA or access to James Bond's gadget cache, about all the poachers will get for their trouble is static.

In 1981, researchers from North Carolina State University began studying black bears in the Pisgah Bear Sanctuary, an 80-square-mile preserve in the Pisgah National Forest near Asheville. Dr. Roger A. Powell, an associate professor of zoology and forestry, has led the project from the start.

For the research, bears were captured in a trap designed to cause no injury. After tagging them and attaching a collar containing a radio transmitter, the researchers released the bears.

But the researchers learned from an informant in 1987 that the radio transmitters were helping black bear poachers. So the researcher team stopped installing the transmitters and removed them from bears previously caught.

Now, however, radio collars again are an essential accessory for the fashion-conscious bear.

Powell said the new transmitters are designed to make unauthorized reception all but impossible. Instead of transmitting continuously, Powell said the new collars will remain silent until they receive a preprogrammed digital code transmitted by the research team. When the team has ascertained the bear's location, another command is given to turn off the bear's transmitter.

"The collars are in a way foolproof for us," Powell said. "If a bear walks far enough away that his collar can't receive the signal to turn off, it will turn off by itself within a half hour."

What is more, each collar has its own code, only one collar is turned on at a time and all of the transmitters operate on different frequencies.

"There's no way the poachers will be able to break through the security," Powell said.

He said the goal of the long-term research project is to find out more about bear behavior and to determine whether the Pisgah Bear Sanctuary is helping to maintain a stable bear population, the purpose for which it was created.

Clay County Progress

So what can we do? Well, as scanner enthusiasts we can help to stop the illegal slaughter of our wildlife by doing what we do best -- listening.

Poachers have been known to use the following equipment: CB radios, FM walkie talkies, 10 meter Ham gear, and FM headsets. (See the accompanying chart for frequency ranges.)

Scanning for poachers is serious business. To do it right, a spectrum analyzer would definitely be an asset. Since most of us can't afford the luxury of such expensive equipment, dedicating several radios to the search mode is the next logical choice.

When you search for poachers, remember that there is no special season for poaching. It occurs year round. But the largest percentage of poaching occurs right before and during the regularly scheduled legal hunting season.

Poaching is a twenty-four hour, round the clock activity. While the favorite time seems to be after dark, poachers have been arrested in broad daylight, no more than a few hundred yards from the main road.

The sound of gun fire during odd times or in closed seasons is another good indicator of poaching operations. While it may not be poachers, don't let it slip by -- turn on your scanner and listen! You should also jot down the time of day, the direction of the shots and the number of shots that were fired. This information should then be passed on to your local wildlife officer.

Some poachers prefer to hunt alone, without the assistance of modern radio equipment. Readers living in rural areas should be on the lookout for vehicles that are parked along the roadside during odd times and during the closed hunting season. If a suspicious vehicle is spotted, take no action on your own. Simply write down the license plate number and pass it on to your local wildlife agent.

If calling or writing to your state conservation officer with such seemingly insignificant information seems rather foolish, you couldn't be more wrong.

A wildlife officer will often compile information from many different sources in order to profile an area that may be under siege by poachers. Your letter or phone call may be all that's needed to confirm his suspicions.

Scanner enthusiasts who may be thinking of taking a more active role in helping to curtail illegal poaching activities are cautioned from doing so. Poaching in some areas of the country is an accepted family tradition. In these families, poaching may very well be the only income. And in many instances, the taking of a human life to protect a family poaching operation is not as uncommon as one might think.

As Jack pulled into his driveway, it was nearly 2 a.m. Entering the house, he expected his wife to be anxiously awaiting his return. She always worried about night stake outs and he had never fallen asleep until after he had returned safely. With snow falling heavily since midnight, he expected that she would be even more concerned.

There was also another problem. His brother had given her an early Christmas gift - a scanner radio. Jack wasn't quite sure how she would react to hearing the action as it actually happened.

Closing the front door behind him, the house was strangely dark. Only a few embers could be seen in the fireplace. On the kitchen table, there was a short note:

"Jack, heard everything on the scanner. Glad you're ok. Very tired, went to bed. Love, Susan."

If you have a story of how radio has played a part in your life or the life of your community, send it to Monitoring Times. If accepted for publication, we'll send you $50.00. All stories should be true, real life events. Manuscripts should be approximately 1,000 words and must include at least one clear photograph.
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www.americanradiohistory.com
### January
- **Features:**
  - Radio Belize
  - Houston Radio Services (aviation)
  - A Voice for Iran (VOA Farsi Service)
  - High Seas Radiotelephone Comms
  - Almost a Radio Celebrity
  - Product Review: Universal M7000

- **Departments:**
  - Ute World: Soviet ships, Euro AF nets
  - Scanning Report: Cellular Wars, Naval Electronics Audio Booster
  - Uncle Skip: Cheap and Dirty Linguistics
  - Fed File: 102nd Fighter Wing of Mass ANG
  - High Seas: Medical assistance on high seas
  - Ham Bands: AEA 2 Meter Isopole, HTI Amateur Radio Union Monitoring Service
  - Sat TV: Scrambling
  - Magne Tests: Grundig Satellite 650
  - Scanner Equip: Kenwood RZ-1
  - Demaw's Workbench: About toroid Cores
  - Exp. Workshop: Build a field strength meter
  - Antenna Topics: Grounded vertical antenna

### MARCH
- **Features:**
  - Cruising Ship Communications
  - Refueling the B-1b Bomber
  - Emergency Communications Networks
  - SCA: FM Radio's Alter-Ego
  - WMLK: Voice of the Assemblies of Yahweh

- **Departments:**
  - Ute World: Soviet Space Shuttle
  - Scanning: Inside the Soviet Embassy, cordless phone antenna
  - Uncle Skip: Contests
  - Fed File: IAR
  - High Seas: Global Maritime Distress and Safety
  - Ham Bands: FM modes, MFJ 2 meter HT's
  - RTTY: 6028 Series FDM
  - Sat TV: Solar outages
  - American Bandscan: Gimmicks for success
  - Below 500 kHz: Maritime VLF
  - Magne Tests: SW Listening antennas
  - Equip Review: Realistic HTX-100, Ant Spec "On Glass" 144-174 MHz antenna
  - Demaw's Workbench: Build your own boxes
  - Exp Workshop: Cooling a hot Kenwood
  - Antenna Topics: Antennas over three decades

### APRIL
- **Features:**
  - Radio's Role in the Overthrow of Guatemala
  - Gandor Aeradio
  - Building the Ultimate Receiver
  - DXing Malaysia
  - The BBC Revisited

- **Departments:**
  - Ute World: British Military
  - Scanning: Frequency Counters
  - Uncle Skip: Fleamarketing
  - Fed File: Motorola
  - Plane Talk: LDCO frequencies
  - Ham Bands: Packet
  - RTTY: M-7000 restitted
  - Sat TV: Starting out in TVRO
  - American Bandscan: Talk radio
  - Below 500 kHz: Platform irene
  - Magne Tests: Grundig Satellite 500 Preview
  - Equip Review: Wilson 1000 Mobile Ant, Carolina Windom, Grove Skywire
  - Demaw's Workbench: Transistor and crystal testers you can build
  - Exp Workshop: Build a one-tube Receiver
  - Antenna Topics: Silence is Golden

### MAY
- **Features:**
  - Airshow!
  - KVQH: High Adventure Ministries
  - "Who's Listening to Shortwave?"
    - Graham Myton interview
  - KKN39: A Federal Mystery is Resolved
  - Choosing the Proper TV Antenna
    - (sidebar) TV DX

- **Departments:**
  - Ute World: In-Flight Emergencies, Rainbow Radio
  - Scanning: Scanning tips, TS-1 Tape Saver
  - Uncle Skip: Tenacity
  - Fed File: Planning a scanner trip
  - High Seas: New York business freqs
  - Ham Bands: Ten meter mobile, MFJ 1621 antenna
  - RTTY: FAX
  - Sat TV: Satellite guides
  - American Bandscan: I DON'T KNOW
  - Below 500 kHz: Beacon test transmissions
  - Magne Tests: Tunemaster Classic Radio
  - Scanner Equip: AOR AR2515
  - Demaw's Workbench: About crystal oscillators
  - Exp Workshop: Make BC-600 a Tone Scanner:
    - Techniques of Taping
  - Antenna Topics: Interpreting decibel values

### JUNE
- **Features:**
  - Listening to the Hurricane Hunters
  - The New Realistic PRO-2005
  - DXing the Soviet Republics
    - (Sidebar on Soviet jamming)
  - Sports: Tuning in the "Good Stuff"

- **Departments:**
  - Ute World: Standard references
  - Scanning: Using the library, NASCAR
  - Uncle Skip: No code licenses
  - Fed File: Air Force One
  - Plane Talk: Aviation terms, foreign airline addresses
  - Ham Bands: The GSO, Valor CX-5814 2 meter antenna
  - RTTY: Mobile operation
  - Sat TV: Weather channels
  - American Bandscan: Houston's outrageous radio
  - Below 500 kHz: Learning code
  - Magne Tests: China's Cougar H-88
  - Scanner Equip: Optoelectronics 2210 freq counter and CCB RF detector
  - Demaw's Workbench: About Coils tis tunable oscillators
Exp Workshop: Fun with Surplus: VLF receiver, line noise filter
Antenna Topics: Overload

JULY

Features:
20 Ways to Increase Scanner Enjoyment
Islam on Shortwave
The British Buccaneers
HF Holdup
The Last Radio Signal on Earth (fiction)

Departments:
Ute World: HF Regional Weather BCs
Scanning: Understanding antennas
Uncle Skip: Foiling interference
Fed File: How to find new frequencies
High Seas: New York VHF maritime freqs
Ham Bands: CW keys and electronic keys
RTTY: Copying Piccolo
Sat TV: K-Sat and FMA
American Bandscan: WZWM Quality Hits
Below 500 kHz: Equipment
Magne Tests: Low HF-225
Scanner Equip: MAXRAD Max-Scan 1000 mobile antenna, Ohio "raven" scanner antenna
Demaw's Workbench: Build an SWR indicator
Exp Workshop: 100 Channels for ICOM R-7000
Antenna Topics: Tunable VHF antenna

AUGUST

Features:
Monitoring the Goodyear Blimps
ICOM's New IC-R9000
Improving Audio Quality with an Audio Graphic Equalizer
DXing the Balkans
Television's First Fifty Years

Departments:
Ute World: USAF Coronet Deployments
Scanning: Scanning in Wash D.C., Ant Spec MON-52
Uncle Skip: QSLing
Fed File: Cracking voice codes
Plane Talk: Atlanta Flight Support
RTTY: Tandy sound analyzer
Sat TV: Getting rid of sparkles, Buizl-1-Meter
American Bandscan: WTIC's Bob Steele, FM authority Bruce Elving
Outer Limits: Government stations
Below 500 kHz: QSLs
Scanner Equip: What's the best programmable scanner for you?
Demaw's Workbench: Build an LF Converter
Exp Workshop: 'The Terrigator' tunable ground
Antenna Topics: The disc

SEPTEMBER

Features:
WJG Memphis Mississippi River Station
DXing Peru
(sidebar on Celestion, Peru)
Make a Scanner Your Copilot
Get Acquainted with the Ham Bands
Brussels Calling

Departments:
Ute World: Verifying utilities
Scanning: Media monitoring
Uncle Skip: Time Stations
Fed File: Military aircraft
High Seas: Cruise ships revisited
Ham Bands: Contesting
RTTY: Using a computer to crack codes
Sat TV: Educational TV
American Bandscan: Kahn Communications
Inventions to improve AM
Below 500 kHz: Swan Island beacon
Magne Tests: Sony CRF-V21 portable
Scanner Equip: Black Jaguar 200
Consumer Electronics: Fisher 1260X Metal Detector
Demaw's Workbench: Capacitors
Exp Workshop: Heath HW-8 conversion
Antenna Topics: Short-wire antenna

OCTOBER

Features:
Presidential Patrol, Portsmouth Harbor CG
Radio Austria International
Beckoning Beacons
Alan Weiner, Radio Pirate of Maine
The Crash of Flight 232 in Sioux City

Departments:
Ute World: Changes in military comms
Scanning: Upcoming cellular changes, Opto 1300
H/A freq counter, Littlegoose neck lamp
What's New: Datametrics Communications Manager
Uncle Skip: C-Note SW Station
Fed File: Washington news notes
Plane Talk: FAA's Central Flow Control
Ham Bands: APRL's "No-code" proposal,
Interference filters, W4PYO's 2-meter quad
RTTY: New mode discovered, news services
Sat TV: SCPC monitoring, Heil SC-One
American Bandscan: WZZZ Hometown Radio
Outer Limits: Report from South Florida
Below 500 kHz: What's on VLF
Magne Tests: The production Bullet 500
Scanner Equip: AOR AR950
Demaw's Workbench: Build a tunable antenna
Exp Workshop: Build a SW converter
Antenna Topics: Half-wave dipole with reflector

NOVEMBER

Features:
The VOA Correspondence Corps
Collision at Sea!
DXing Cambodia
America's Secret Air Force
Howling at the Moon: Late-night scanning

Departments:
Ute World: Life on an aircraft carrier,
MARS Afloat
Scanning: Scanner temptations - "scanner etiquette"
Uncle Skip: Utility listening
Federal File: Patience and Perseverance
High Seas: Simplex vs. Duplex, Cruise ship changes, oil companies
Ham Bands: Wish list
RTTY: Digital voice transmissions
Sat TV: 10 Questions on SCPC
American Bandscan: Jazz stations
Below 500 kHz: DXing beacons - a basic list
Magne Tests: Panasonic RF-B65
Scanner Equip: New scanners from Radio Shack, GRE800 Super Converter II
Demaw's Workbench: Build an RF/DC Voltmeter
Exp Workshop: Modifying the DX150/180
Antenna Topics: The dipole

DECEMBER

Features:
Monitoring Emergency Medical Services
Shortwave from Mexico
The Secrets Inside Nellis Air Force Base
Scanning for Poachers
1989 Monitoring Times Index

Departments:
Ute World: Croughton, England, comms
Scanning: Holiday Gift Buying
Uncle Skip: DX Tape Recording
Fed File: Coast Guard
Plane Talk: VHF Aero Comms
Ham Bands: Compact monitoring post
RTTY: VLF Comms
Sat TV: Wish list
Outer Limits: Reflections on 1989
American Bandscan: WMCA: An inspiration to Broadcast
Below 500 kHz: New beacon?
Magne Tests: Grundig Yacht Boy 230
Scanner Equip: PRO-2024; Autosearch/Store for PRO2004/5
Demaw's Workbench: About tuning diodes
Exp Workshop: R-7000 Factory Updates;
Mailbag
Antenna Topics: Beam antennas

Should you wish reprints of any of the above articles, please enclose a self-addressed, stamped envelope plus $2 per article.

MONITORING TIMES December 1989 23
THANK YOUSome good advice from DXer and QSL-collector Kirk Allen of Ponca City, OK: "I recently received a very nice letter from a veri-singer at one of the more difficult stations to QSL. He was responding to a thank-you I had written him. He informed me that after answering many letters during the past several months, I was so far the only one who had written to thank him.

"I don't blame him for a bit of frustration. Granted, rising postage costs and time constraints make it difficult to send out thank-you notes to stations doing us the favor of answering our reports. But it seems the vast majority of QSLers don't bother to send thank-yous at all, even to rare verifiers.

...Let's not depend on the other guy to make up for our failing to realize these are humans we're dealing with, not QSLing machines. I admit I don't send thank-yous to every station that verifies my reports, but I do try to hit the ones that are more difficult to verify—just one way I can silently help my fellow DXers, at least the ones attempting to verify the same station. We might find ourselves in a no-QSL situation eventually, and only because more of us didn't bother."

ALBANIA A West German who won a trip to Albania managed to visit Radio Tirana. Title of the identification signal is "With pickax in one hand, and rifle in the other," referring to the expulsion of the Soviets in the 1960s.

People at the station were quite open, accepted comments that their programming is too political. A new director wants to modernize the station, liven things up. The isolated German-language staff had never listened to foreign radio stations.

Very old Chinese and Soviet transmitters are 100 kilowatts maximum. Giant tape recorders and switching panels make the station look more like an electrical power control center, but everything seemed to work. (Wolf Harranth, Radio Netherlands Media Network)

ANDAMAN ISLANDS The test phase of All India Radio's 10-kilowatt transmitter at Port Blair is over. Now operates 0700-0850 UTC on 7180, 1030-1630 on 4760; plans to extend to mornings, 0010-0215 on 4760, 0230-0345 on 7180 (Manosij Guha, India, RN MN) Also on 4760 is Leh in north India, but in south India, Port Blair is heard well. 7180 is unreadable on the mainland, co-channel to Bhopal, thanks to the share-frequency policy. QSLs are coming from The Station Engineer, AIR, Port Blair 744101, Andaman Islands, India (Jose Jacob, ibid.)

ANGOLA An outlet of Radio Nacional de Angola was heard drifting around 5324.5, audible from 2115 or so; RNA vibraphone IS and news on the hour. Probably Luanda, formerly on 4953, 4926-27, and near here about five years ago (Bob Hill, MA)

ANTARCTICA The Armed Forces Antarctic Network, 6012 kHz, is operated by volunteers during the winter March-September, when mail arrives only once and never goes out. During the summer, October-February, AFAN is manned by its full complement of military broadcasters, when the McMurdo population soars to a thousand (Lt. M.R. Reed, USN, Operation Deep Freeze, with a QSL to Rowland Archer, NC)

AUSTRALIA December is Radio Australia's jubilee month; "Australia Calling" began on Dec. 20, 1939. That's now the title for a five-part documentary series tracing the development of Radio Australia. Dec. 17 will be an Open Day, public tours of the facility available, and displays of First Day Covers commemorating other stations' anniversaries. Australia and Norfolk Island were to issue stamps for RA's jubilee in November. Be sure to listen Dec. 20 when RA hopes to welcome many important officials to the station, including the Prime Minister (Roger Broadbent, RA, WRTH Downlink)

An entirely introspective review of RA makes 30 recommendations, including: set up overseas relay; new site in northern Queensland; take over ownership of its transmitters from Telecom; drop the Japanese service on shortwave but retain the staff while studying more effective means to serve Japan. A major change in programming from December, to reflect priorities in the southwest Pacific.

ABC Managing Director David Hill says the state of RA transmitters is appalling and disgraceful. RA will get a new General Manager in early 1990, Richard Bronowski (M.B.A. Harvard, now ambassador to Korea), who feels RA's current affairs programming is excellent, but it spends far too much time playing pop music, much of it even to Australian. (RA Communicator)

AUSTRIA Radio Austria International has a new broadcast in Arabic, Sundays at 0505 to the Middle East, but also heard on the Canadian relay, 6015 (Ernie Beir, Ont.) Another mixup: at 0300 when 11925 was supposed to relay RCI, Austria's own news in German was heard, parallel to 13750.

BRAZIL Some Radio Nacional stations have been privatized with new names: on 4845, with much lower power, Radio Caboca, Manaus; on 4875, Super Radio Roraima, Boa Vista; on 4915, Radio Difusora, Macapa (Antonio Ribeiro de Motta, Brazil, RCI SWL Digest) Radio Timbira heard with sports at 0132 on 9952.2, second harmonic of 4976.1 (M. Molano, Spain, Play-DX, RCI SWLD)

BYELORUSSIA Radio Minsk has had a minor external service in White Russian and German, not easily heard in North America, but now we've found them in White Russian via Soviet transmitters also carrying Radio Vilnius, at 2330-2400 on 17690, 17665, 15180, 11675, 9610. Next step: English? Some lower frequencies may be used during winter.

CANADA Correction to last month: time for German from RCI, if it still exists, is 1730-1800 UTC. The winter schedule also shows 13650 as the only frequency on this band, for Europe, 1430-1700 (except Sunday), daily 1700-1800, 2000-2100, 2200-2330.

CAPE VERDE Onda Verde is the private relay station planned to start in mid-1991, with three 500 kW transmitters on Santiago at Cidade Celula near Praia. Letters of intent have been received from RFI, VOA and NHK; any major international broadcaster may apply. Revenues of $8 million a year are expected, 5% of which plus taxes will go to the Cape Verde government, which inherits the entire facility after 25 years. The $25 million project is being undertaken by Media Connexions International, Paris (Radio Nederland's Radio Enlace and Media Network)

CAYMAN ISLANDS Radio Caymans has a shortwave transmitter and has considered using it, but is not convinced this would benefit tourism (Kent Willis, NU/FT via Radio Nuevo Mundo) A number of other non-SWBC countries have been approached.

CHINA Radio Beijing carries outright commercials during its alternate-Friday business show, for Finnair and the Olympic Hotel. Li Dan, not heard since June, returned to Radio Beijing in October. A recent brochure gives these phone numbers at the station's English department: director, 868581-2274; audience relations, 868581-2760;
current affairs, 8013134; newssroom, 862691 (Bruce MacGibbon, DX Spread)

**COLOMBIA** Radio Patria Libre, clandestine, has been active lately between 6755 and 6760 kHz at 0030-0110 UTC (Ernie Behr, Hans Johnson; Brian Alexander, Robert Ross, Fine Tuning)

**COSTA RICA** Listen for our World of Radio show on Radio for Peace International at these times: Friday 2000; Saturday, 0030, 0430, 1930; Sunday 0130, 2230; Tuesday 2230; Wednesday 0300, 0700; plus additional late-night repeats, especially on weekends; on one, or two or three of: 7375, 13660, 21566, 25945.

Newsfeeds from UN Radio have shifted to weekdays 2225, 0255—both followed by other UN programs, except on Tuesday, Second Opinion, a program from The Progressive magazine, is new on the schedule; Thursdays at 2300, UTC Fridays 0330. French appears at the same times on Monday-Tuesday, German on Friday-Saturday.

**CYPRUS** The other CBC airs an external service in Greek to the UK via BBC transmitters here, Friday, Saturday, and Sunday at 2215-2245 on 6180, 7180, 9535 (Bob Padula, Australian DX News)

**CZECHOSLOVAKIA** ITU regulations show three transmitter sites now for Radio Prague: Litomsyl, near Brno; Rimavská with new 250 kW facilities near the Hungarian and Ukrainian borders; and Velke Kostolany in the center of the country. No out-of-band info is shown, but inband usage is: 6055, 9600, 9605, 15110, 21505 from L; 17840, 21705 from R; 9505, 9540, 15155 from V (Bob Padula, ADXN)

**DOMINICAN REPUBLIC** Radio Clarín planned to move from 11700 to 9950 and carry programs of the Cuban American Association, one hour daily, expanding to three. This would pit it between other Cuban clandestines, Radio Caiman on 9965 and La Voz del CID on 9942 (Marcel Rommerts, Holland, DSWCI SW News) But so far not reported on 9950.

**ECUADOR** Radio Amazonas operates only on 4870 kHz, daily at 1100-1230 and 2100-2330 in Shuar: 1230-1800 and 2330-0400 in Spanish. Principal studio is in Macuxa, inhabited exclusively by the Shuar. Spanish programs are fed through a repeater on Cutucu cordillera from Macas and Puyo, with offices at the latter. (Prof. Marco G. Díaz G., Gerente, in a letter to Rowland Archer, NC)

Although announcing 15155, 11775 and 9745, HCJB in the evenings is heard only on the first, and 9745 is blocked by Moscow, perhaps via Cuba (Mickey Delmage, Alta., CIDX Messenger) A live program admitted that two transmitters were down, waiting for replacement parts to clear customs.

Radio Iris has stations in Quito and Esmeraldas, but the shortwave outlet on 3380 seems now to be in Quito rather than Esmeraldas. Nothing could be learned from a visit to the station in Quito since I was given a bad welcome. (Hirotugu Nishihara, Ecuador, Radio Nuevo Mundo)

**EL SALVADOR** Radio Venceremos, clandestine, has new high-power transmitter around 6295-6310, varying to escape jammer, at 0000-0130 and 0200-0330. Later it was around 6335, 6319, 6306 during one transmission; as strong as La Voz del CID but often missing for several days. The weaker Radio Farabundo Martí was on 6710.4 at 0130-0224, not daily (Ernie Behr, Kenora, Ont, World of Radio) Radio Venceremos hopes to add English newscasts in late 1989 or early 1990 (Anita Ocampo, US correspondent, via Wes Miller, DX Ontario)

**FINLAND** YLE Radio has started a “speciality on shortwave,” weekly news review in Classical Latin, Sundays around 1455-1500 on 21550, 15400. Pronunciation differs from Church Latin, but it’s odd to hear this with a Finnish accent (World of Radio)

**FRANCE** RFI’s morning program in English to North America has shifted to 1230-1255, on 17650, 21635, 21645. Just before the top of most hours, listen for jazzy variations on La Marseillaise as a tuning signal.

**GUAM** High Adventure is still begging for money to complete its station here; but KHBN is registered for the current season at 0100-1600 on 9830, 2000-2400 on 9840, both 310 degrees to China. The location is Piti, (via George Jacobs & Associates) But King of Hope, or Voice of Hope—Asia, has bought time on Guam’s existing station, KSDA, Monday-Friday at 0400-0500 on 15225 in Chinese, with English IDs (Yamada and Hayashi, Radio Japan DX Coner) It’s 0400-0700, address Box 22228, Guam (Arthur Cushing, NZ, OzDX)

**HAWAII** LeSea Broadcasting, owner of WHRI in Indiana, has applied for a shortwave station here to cover the Orient (DX-Kaunting via Radio Australia)

**INDONESIA** Radio Republik Indonesia plans a massive upgrade in its regional shortwave services, probably taking several years starting in 1990. Registrations with the ITU show high-powered facilities at a great many regional cities and towns, up to 100 kW. Channels in the 49 meter band will be used during local mornings and evenings, 31 or 41 in the daytime. The external service plans to add another site, Biak, Irian Jaya with 300 kW to serve North America, Australia, NZ, Radio Australia (Bob Padula, ADXN)

**ISRAEL** Voice of Peace is a popular offshore pirate operated by peace activist Abie Nathan near Tel Aviv. An Israeli judge has sentenced Nathan to six months in prison for meeting with Yasser Arafat and other leaders of the Palestine Liberation movement. He is the first Israeli to be jailed under a much-flouted anti-terrorism law banning unauthorized contacts with the PLO (Reuter via Swedish Calling DXers)

**ITALY** A communications bill before parliament has no provision for private shortwave broadcasting, so what will become of stations like AWR-Europe and IRRS? (RNMN) Due to political changes, Italian Radio Relay Service now accepts programs in eastern European languages, if they are purely religious or cultural/social, without political elements (Alfredo E. Cotroneo, IRRS) Pan American Broadcasting, religious program broker for WRNO, KUSW, Equatorial Guinea, is also considering using IRRS, and asking for reports directed to California on IRRS reception Sunday mornings on 9865 in Europe (via Play-DX)

**JAPAN** For the winter, Radio Japan replaces 11865 with 9505 in English to North America at 1400, 1500, 1700, 1900. The Gabon relay at 2100 and 2300 on 11835 ex-11765.

**KIRIBATI** An Austrian-based chain-letter scam, Commerce Control Inc., lists five “participants,” all of whom seem to work at Radio Kiribati (Mike Nikolich, NU via Radio Nuevo Mundo)

**KOREA** Han, Hee Joo, chief of the Radio Korea English section announced she is expecting a guest from Radio Canada International to discuss relay exchanges. RK would like to use Korean, English and Spanish via RC1. Experiments will determine if this would be satisfactory for both (Toru Yamashita, Radio Japan DX Coner) Overheard at ANARCON: she was
approached by another station with the same idea.

**KUWAIT** Radio Kuwait was excellent in English at 1800-2100 on 21675 while it lasted, including the all-important list of all-night pharmacies concluding the 1830 news. *(World of Radio)* Then it moved to 13610, and also missing from 11665 (Ernie Behr, Ont) Kuwait also using 13610 in Arabic around 0400, conflicting with Berlin.

**LITHUANIA** A proposal has been made for Radio Vilius to start a foreign service in Russian to the Soviet Union, using its own shortwave transmitter, 50 kW. By 1992 a new 250-kW transmitter should be installed in Lithuania (BBC Monitoring)

**MALTA** Voice of the Mediterranean is easy to overlook due to the late hour, English at 0600 on 9765. But maybe it’s worth overlooking with programs like *Psychology for Today*, Saturday at 0605.

**MARSHALL ISLANDS** WSZO, 4940 and 6070, confirms their shortwave transmitter is unserviceable. They left the air late in 1988 due to transmitter problems and a faulty antenna tuning unit. Replacements are still awaited (Ole Alm, *SW Bulletin* via SC DX)

**MEXICO** XEUI, 5980, Linares, has a DX program Saturdays at 2130 in cooperation with the Club DX Miguel Auza, in Zacatecas (Luis Antero Aguilar, RNM)

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Radio Trans Mundial

Bonaire, Antillas Holandesas

**NETHERLANDS ANTILLES** Though missing from printed schedules, Radio Transmundial has a weekly broadcast in Baniwa, a Brazilian Indian language, Saturdays at 0715-0730 on 800, 9515, 11885. The show helps maintain the tribe’s cultural identity. The timing may seem too early, but in fact the men are getting home then after middle-of-the-night rounds of their rubber trees, armed with shotguns for protection against terrorists (Chuck Roswell, TWR, via Tim Hendel, FL) On the same transmission just after the 0700 news weekdays is *Modulo DX*, in Portuguese (*Bonair Wavelengths*)

Radio Netherlands replaced 9505 with 11890 at 1030-1125, parallel 6020.

**NEW ZEALAND** Radio New Zealand International has this current schedule: 1730-2005 on 17730, 15485; 2245-0045, 0045-0230 Saturday and Sunday only, 0230-0630 on 17730, 15485; 0800-1105 on 9850, 11780. Still using 7.5 kW transmitters; the new 100 kW should be on by late January, probably on same frequencies.

**PAPUA NEW GUINEA** See last month; Radio Enga, 2410, should now be back with 10 kW. Modulation of news relays from Boroko can be quite low, but good modulation is typical of the new NEC transmitters elsewhere. Enga has lots of educational, agricultural programs, requests, messages like South American stations. It signs on and off with the national anthem, *O Arise All Ye Sons of This Land* (Gordon M. Darling, PNG, RA Communicator)

**PERU** New station on 4860 (nominal 4850) is Radio Comercial Educativa, at Peca, Bagua, Amazonas, at 1300-0300 with tropical music (Hirotogu Nabeshima, Peru, RNM)

**SAIPAN** Revised schedule of KBH transmitter #1: 0400 on 17780, 0800 on 9530, 1200 on 9465, 1400 on 9530, 1800 on 9455, 2200-2400 on 15405. Transmitter #2: 0600 on 17855, 1000 on 15115, 1200 on 15285, 1400 on 15385, 1800 on 17770, 2200 on 15275, 0000-0200 on 15445 (George Jacobs & Associates)

**SPAIN** Radio Nacional de Espana has been inserting brief talks in Quechua and Guaraní, some UTC Sundays around 0355, on 9360, 9630, 15110, 15125 (Tim Hendel, FL *World of Radio*)

**SRI LANKA** SLBC is discontinuing its Japanese broadcasts, since the only announcer is emigrating to the USA (Hiromasa Fujii, Japan, SCD A)

**SUDAN** The English program mentioned last month at 1530-1600 on 9540 is also on 11625 (Bruce MacGibbon, OR, DX Spread) 11625 is a 10-kilowatt unit at Juba (Andy Sennitt, RNMN)

**TAIWAN** Voice of Free China’s English hours via WYFR in Florida: 2200 on 11805, 9582.5; 0200 on 11740, 9680, 5990; 0900 on 9680, 5980, 5950 (two transmitters, one beamed north, one west); 0700 on 5990. From March 25, the 2200 broadcast should shift to 15440, 17845.

New Star Broadcasting Station, 8300, heard from 1300 to 1350 with Chinese music and numbers; also on 11429.6 until 1337, but not parallel (Ernie Behr, Kenora,Ont.)

**USA** Mayak still carries programs from different Soviet republics each weekday at 1430 on 12000, 12010 and others; heard with local IS and ID one Thursday from Kishinev; other days from Frunze, Dushanbe, Ashkhabad, etc. A good change to hear every local IS and ID (Ernie Behr, *World of Radio*)

**UNITED ARAB EMIRATES** English at 0330 from UAE Radio, Dubai, on new 15400, parallel 15435 and 17890 (Ernie Behr, RCI SWL/D). After the news, we heard a feature on camel caravans called *Welcome to Islamic Traditions Through the Ages*

**UNITED KINGDOM** The last few weeks of each year, starting Nov. 26 this time, BBC presents *African Theatre*, six new plays from a BBC competition: Sundays at 1500 on 21490, 17740, 15420, 11860; 1615 1715 (Bruce MacGibbon, OR, DX Digest); see SWL Digest; see also on 15830 (Hirotsugu Nabeshima, via RNMN)

**VIETNAM** The clandestine, Vietnamese Resistance Radio broadcasts for one hour at 0200, 0600, 1000, 1400 and 2200, on 7300 kHz (BBC Monitoring via RCI SWL Digest). Keep up to date with much more news about shortwave broadcasting in *Review of International Broadcasting* and/or DX LISTENING DIGEST. Samples are $2 each in North America, 7 IRCs or US$3 each overseas airmail, US funds on a US bank. 10-issue subscriptions in North America costs US$21, or both for US$40, from Glenn Hauser, Box 70702, FL 32614. Also monitor Glenn Hauser’s broadcasts: see Costa Rica and USA for *World of Radio*; and on RCI SWL Digest; see program guide and frequency section.
Broadcast Loggings

Let other readers know what you're enjoying. Send your loggings to Gayle Van Horn
P.O. Box 98, Braintree, NC 28902
English broadcast unless otherwise noted.

0000 UTC on 15130
CHINA: Radio Beijing. Newscast coverage on Korea and celebrations of the founding of the People's Republic. Comments on plans for a game preserve to protect the panda's habitat. (Robert Hurley, Baltimore, MD) Monitored on 11755 kHz at 0642 UTC. (Frank Duggan, Phoenix, AZ)

0030 UTC on 15110

0040 UTC on 11820
CUBA: Radio Havana. Feature on Cuba's special schools for students with learning disabilities, and special Cuban music dedicated to Nelson Mandela. (Sam Wright, Biloxi, MS) Program "African Desir" also logged on 11820. (Bob Fraser, Cohassett, MA)

0100 UTC on 9575
ITALY: RAI. World news with national story on arms traffic in Italy being under investigation. (Bob Fraser, Cohassett, MA)

0110 UTC on 4915
VENEZUELA: Radio Rumbos. Spanish. Pop vocals and canned "Rumbos" ID. Time check for Caracas and romantic ballad from Julio Iglesias. (Sam Wright, Biloxi, MS) (Frank Duggan, Phoenix, AZ)

0125 UTC on 13730
AUSTRALIA: Radio Australia International. German/English. Closing five minutes of German service to ID/frequency quote at 0130. English headlines introduce world news. (H.M. Thomas, Birmingham, AL) Heard on 9675 kHz at 0130 UTC. (John Carson, Norman, OK)

0135 UTC on 11840
PORTUGAL: Radio Portugal. Feature on Portugal travelogue, suffering from interference. (Frank Duggan, Phoenix, AZ) Heard on 9690 kHz at 2348 UTC. (John Carson, Norman, OK)

0300 UTC on 4934
KENYA: Voice of Kenya. Wrap up of national news and time check. Native African music and ID quote as "This is the Voice of Kenya in Nairobi." --ed. (Frank Duggan, Phoenix, AZ)

0315 UTC on 5080

0327 UTC on 11500
TUNISIA: Radiodiffusion-TV Tunisienne. Arabic. Recitations past 0330. Audible with fair quality on parallel 17910 kHz. (Harold Frodge, Midland, MI)

0335 UTC on 4840
VENEZUELA: Radio Valera. Spanish. News briefs and "Radio Valera" ID, suffering from interference. (Frank Mierzwinski, Mt. Penn, PA)

0445 UTC on 7250
NIGERIA: Voice of Nigeria. Nigerian anthem and chime interval signal. Station ID, today's program lineup, and great African music program. (John Carson, Norman, OK)

0500 UTC on 13245
KUWAIT: Radio Kuwait. Sign-on at 0500 UTC with ID and frequency schedule. Poor signal quality for music program to include selection "Where Is the Love." (Mark Seiden, Coral Gables, FL) Arabic music program on 15905 kHz from 2015-2100 UTC. --ed.

0515 UTC on 4865
COLOMBIA: La Voz del Cinaruco. Spanish. Latin music program to ID/announcement break. (Frank Duggan, Phoenix, AZ) Monitored from 0210-0220 UTC. (Frank Mierzwinski, Mt. Penn, PA)

0518 UTC on 5030
COSTA RICA: Radio Impacto. Spanish. Latin music program with breaks for canned "Impacto" ID. Sign-off with ID and national anthem at 0600 UTC. (Brian Johnson, San Diego, CA)

0529 UTC on 4925
PHILIPPINES: Far East Broadcasting Co. Religious programming to include children's acapella hymn. (Frank Duggan, Phoenix, AZ)

0545 UTC on 15345
ARGENTINA: Radio Nacional. Spanish. Time pipes signal and station ID. Easy-listening and Latin-sounding. (Frank Duggan, Phoenix, AZ)

0545 UTC on 11160
UNITED KINGDOM: BBC. Alistair Cook's commentary on Sec. Baker's worldwide travels to address world problems, with emphasis on the impoverished citizens of Mexico City. (Robert Hurley, Baltimore, MD)

0556 UTC on 4915
GHANA: Ghana Broadcasting Corporation. English/Vumacu. Native African music and station ID. International news in English at 0600 UTC. (Mark Seiden, Coral Gables, FL) (John Carson, Norman, OK)

0600 UTC on 11775
ECUADOR: HCJB. "DX Party Line" with discussion on Radio Greenland, review of mapping software for Atari computers, and the effect of electricity rationing in Chile. (Robert Hurley, Baltimore, MD)

0600 UTC on 7189.5
NAMIBIA: Radio Southwest Africa. Afrikaans. Fair signal for choral music and ID at the hour. National news schedule ID/repeat. Easy-listening music suffering deep fades. (Sam Wright, Biloxi, MS)

0635 UTC on 3310.3
BOLIVIA: Radio San Miguel (tentative). Spanish. Flute solos for ten minutes. Fair-poor aural quality for music breaks, which might have included an ID. (Larry Van Horn, Gretna, LA)

0645 UTC on 4775

1040 UTC on 3395
PAPEA: NEW GUINEA-New Britain: Radio East New Britain. Pidgin. Male/female announcers with talk and intros for music. Station ID with additional chal. Improved audio at 1112 UTC. Subsequent daily checks found improved music signal. (Frank Mierzwinski, Mt. Penn, PA)

1330 UTC on 20690
FINLAND: Radio Finland. "Good Morning North America" show with host Eddie Hawkins. "Solidar" music tune by the Helsinki Regimental Band. (Robert Hurley, Baltimore, MD) Audible on 15185 kHz at 0235 UTC. (Harold Frodge, Midland, MI)

1506 UTC on 15245
AUSTRALIA: Radio Austral. "International Report" features the state of Hawaii and its history. Audible on 15415/9580 kHz at 1058 UTC. (Hank Lukas, Plainview, NY) Monitored at 0100 UTC on 21740 kHz. (Bob Doyle, Shelton, CT)

1745 UTC on 13715

1800 UTC on 15140
CHILE: Radio Sistema Nacional. Spanish. Announcer yak and ID as "Radio Sistema Nacional" at 1518 UTC. Station commentary and Latin music at 1530 UTC. (Frank Mierzwinski, Mt. Penn, PA)

1831 UTC on 5980
BRAZIL: Radio Guaruja. Portuguese. Sports coverage from usual hysterical announcers. Numerous local ads and station promos for "Guaruja." This station was no more than a few miles away, but surprisingly weak. (Harold Frodge, logged from Santos, Brazil)

1857 UTC on 15345
ARGENTINA: RAE. Spanish. Fair signal for Argentine tango music program to ID past 1900 UTC. (Harold Frodge, logged from Santos, Brazil)

1905 UTC on 15475
GABON: Africa Numero Un. English/French. Lively African pop vocals with canned promo, "more music from Anga No. 1." French DJ with up-coming program line-up, and intros for African highlife music. (Sam Wright, Biloxi, MS)

1936 UTC on 6005
CANADA: CFCX-CFCF. News items, auto commercials, and phone in calls for station contest. Bank promos, and IDs. (Frank Mierzwinski, Mt. Penn, PA)

2040 UTC on 13690
IRAQ: Radio Baghdad. Arabic. Midlee Eastern music program to 2054 UTC. International news headlines, music bridge and topics from the "Iraqi Press Report." (John Bougerols, Thibodaux, LA)

2100 UTC on 11990
USSR: Radio Peace and Progress. World news and editorial on USSR/Afghanistan relations. Program on ecology with ID on the half hour. (Leonard Price, Annadale, VA)

2210 UTC on 6030
BRAZIL: Radio Inconfidencia. Portuguese. National news and IDs. Audible on parallel 6000 kHz. (Harold Frodge, logged from Santos, Brazil)

2212 UTC on 9000
EGYPT: Radio Cairo. Closing editorial comments and ID at 2214. Arabic music and additional editorial on Israel. (Mark Seiden, Coral Gables, FL) (Robert Hurley, Baltimore, MD)

2225 UTC on 9480
ALBANIA: Radio Tirana. Trumpet signal and ID. Tonight's program line-up, followed by text on the Albanian Party of Labor. News on relations of Albania with emphasis on the cultural arts. (Larry Van Horn, Gretna, LA)

2250 UTC on 13605
UNITED ARAB EMIRATES: Voice of UAE. Excellent signal for pop music program. Friendly DJ conducts phone interview with listener. (Leonard Price, Annadale, VA) (John Carson, Norman, OK)

2255 UTC on 9445
TURKEY: Voice of Turkey. Feature on "Masterpieces in Turkish Museums," featuring Roman mosaics exhibited in Istanbul. (Bob Fraser, Cohassett, MA)

2240 UTC on 4900
CAMEROON: CRTV-Bafoussam. French/English. Fair signal for male/female announcers. Highpitch and pop vocals to 2300. Sign-off routine with IDs and national anthem to 2304 UTC sign-off. Rechecked at 0440 UTC; found French programming audible to 0615 fade out. Hope they'll QSL my report. (Mark Fairther, Memphis, TN) If they do, don't forget the "QSL Report!" --ed.

2305 UTC on 3316

2315 UTC on 6025
DOMINICAN REPUBLIC: Radio Amamar. Spanish. Musical variety of lite pops, easy-listening and Spanish instruments. Station ID and local interest announcement. (Larry Van Horn, Gretna, LA)

www.americanradiohistory.com
Croughton Keeps its Secrets

As most shortwave enthusiasts know, AFRTS shortwave broadcasts were removed from the air last year. In addition, the satellite feeds of AFRTS TV and Radio programming are now scrambled. About the only way to hear AFRTS programming now is to listen to the RAF Croughton, England, MUX Single Sideband feeder scattered throughout the band.

Now comes some interesting information from Donald Tomkinson that these broadcasts might not be coming from Croughton as frequently listed in loggings. Donald comments: "I have been reading with interest for the past several months about RAF Croughton transmitting AFN/AFRTS. I do not think this is so. Several years ago I lived about five air miles from RAF Croughton and did not pick these transmissions up. Of course, that was before the demise of the AFRTS HF system. (Editor's note: These feeder broadcasts have been on the air for several years.)"

"Also, all the antennas on the "farm" are directional except for one or two discones. So if these transmissions are coming from Croughton, where are they being sent to?"

"Now I live 100 miles from Croughton. The only frequencies I have been able to receive concerning AFN/AFRTS are on 10537.6, 13651.2, and 16041.2 kHz, all in LSB. The problem is that the signal level is very low; in fact, they won't budge the S-meters off the peg here. Also, if they were coming from RAF Croughton I would expect a time delay as compared with the AFN outlets in Germany on 873, 1107, and 1143 kHz, but there are none."

"Even with a satellite feed (there is an 80 foot dish at RAF Croughton) you would still have the delay as the transmissions are coming from different places.

"The other odd thing is that the signals are not affected by propagation, at least from my location. This seems to contradict that they don't come from Crompton. They could be coming from Germany, but I would expect some propagation effects on the frequencies involved."

"The programming on these frequencies matches the AFN outlets in Germany only during news and sports. It appears these transmissions are used as a "network feed" (they are in fact a network feed --ed.) and possibly rebroadcast for time shifting. It would be interesting if some amateurs who have beams could take a bearing and compare them. I would also like to know what kind of signal level you folks in the States are receiving these transmissions. They are listenable here but are at very low level signal strength."

"I have not been able to pick up any FDM (all readers note this --ed.) on these frequencies either. Only RTTY and FAX from GFH Halifax about 3 kHz down in frequency."

And Donald is not the only one noting RAF Croughton this month. Check out this from Chris in the UK: "I live about two miles from the transmitters at RAF Crompton. All the USAF and U.S. Embassy (emphasis added) transmissions are pretty loud here. In fact KRH50 -- U.S. State Department Radio, London -- puts up key clicks all across the spectrum. Can I complain to Congress?"

Well, Chris, I don't think Congress would have a sympathetic ear but I and the rest of our readers would like to know more of what you are hearing, especially concerning Don's report, and if KRH50 is definitely coming from Crompton.

How about it Mr. UK; any comment on these two reports?

The New Air Force One

Bill Such now reports that a new Air Force One is expected to be delivered this month from Boeing to the 89th MAG at Andrews AFB. According to Bill, once delivered, the aircraft will carry the designation VC-25A. The civilian equivalent of a VC-25A is the Boeing 747. Listeners are invited to report any usage of the VC-25A designation to this column.

Hurricane Season Wrapup

The 1989 hurricane season just ended last month and Utility World regular, Jim Boehm, in San Antonio has some interesting closing thoughts on monitoring the big tropical monsters.

A major change that all readers should know is that the Central Gulf Hurricane net that used to meet on 7268 kHz is now using 7235 kHz. During a Gulf of Mexico hurricane, this is a very important information source to monitor.

Jim also uses the CW weather broadcast from NAVCAMS-LANT and the USB broadcast from the USCG COMSTA NMN-Portsmouth, Virginia, to track the hurricanes. He says that as they approach land, the ham radio networks provide more timely information than other sources.

Another interesting tip from Jim is that he also tunes in to AM broadcast stations along the Gulf coast for local affected area information. 50 kW KTRH-740 kHz in Houston and WOAI-1200 in San Antonio, Texas, are designated disaster stations for those areas and are easily heard.

Jim, you can also add WWL-870 in New Orleans to your list if the hurricane strikes the central Gulf coast as they carry extensive coverage when areas around my location in Louisiana are threatened.

John Combs noted that, during Hurricane Hugo, WAPE-690 in Jacksonville received authorization from the FCC to extend their daytime power and antenna arrays after sunset to help the affected areas in the Carolinas receive hurricane information. He also said that amateur radio operators from the Orange Park and Jacksonville areas were in the studios providing information to the station to assist in that effort.

Speaking of extending hours, Jim also mentioned that after sunset, stations in the storm's path are permitted by the FCC to continue broadcasting with their daytime power and thereby be heard when they otherwise wouldn't be heard, thus providing useful information (and DX too!).

Utility monitors that regularly tune in these big storms might want to file away these helpful tips for next season's round of hurricane monitoring. Many thanks to John Combs and Jim Boehm for these interesting tips.

HMC ID'ed

Long time Ute World reporter Rick Matthew in Vancouver, British Columbia, Canada, passed along an answer to a recent unid in the logging section of this column. Rick says that the call sign HMC belongs to Chongjin Radio in Chongjin, North Korea. Rick also mentions some other calls that were recently heard including: HMZ-Pyongyang Radio and HMU-Wonsan Radio, North Korea. These are all coastal stations in the maritime bands.
**SELCAL List -- Yes!!!**

I have learned from our readers over the last few years that all you have to do is ask. Someone out there usually has an answer to just about anything. Grahren Wieteir (I hope that is spelled right, the handwriting was hard to read) says that "yes, a SELCAL list for aircraft is available." The booklet is titled *High in the Sky* and it is published by the Manchester Aviation Society in England.

It is available in most aviation shops in England and stateside aviation monitors might wish to try the following address to receive a copy of this book: The Aviation Society (TAS), 15 Mountbatten Close, Unsworth, Bury BL9 8PW England.

Grahren is also interested in hearing from anyone in the U.S. that can supply him with channel listings for the U.S. military. He has accumulated a lot from the UK and would be happy to trade material. He also has a stud list (as they are called in the UK), airfield frequencies, discrete frequencies, air-to-air refueling channels, call signs, and squelch codes to trade. You can write to him at Rock Cottage, Lanslau Road, Brimscombe, St Roud GL5 2OF England.

**Rescue Monitored by MT Reader**

As always, *MT* readers are usually the first to hear the action and a recently published incident involving a private pilot was no exception.

Most of you remember seeing on the evening news about the private pilot flying down the east coast who passed out in the cockpit of his small plane. Well, one of our listeners in Miami, Mr. CFE, caught the whole action on his shortwave radio within the utility bands. Here are some excerpts from his loggings:

"5696.0 USCG Rescue 1503, AF Rescue 824, USCG COMSTA Miami, USCG Miami Operations and USCG Rescue 1494. Rescue 1503 and 824 abreast of the aircraft with the unconscious pilot.

"Aircraft originally enroute Rocky Mount, North Carolina, from Washington, DC. Aircraft on autopilot skirting eastern U.S. Aircraft ran out of fuel and spiraled into the waters off Elusetha Island in the Bahamas at 1630 UTC. Air Force jumpers were deployed from AF C-130. Pilot pulled from water by CG 1494, an H-3 helo, and flown to Nassau for subsequent USCG Med Evac flight to Miami, Florida. Monitored during the time period 1545-1930 UTC.

"9984.0 USCG Rescue 1503, AF Rescue 824, USCG COMSTA Miami working rescue of unconscious pilot. See 5696.0 preceding this, and also AF Rescue 824 working through the CG with a phone patch to CBS radio in regards to the recovery of the pilot from the downed aircraft at 1830 UTC."

It just goes to show that you never know what you are going to hear in the utility bands. Being at the right place at the right time can be very rewarding. Thanks, Mr. CFE.

**Coronet Article Arrives Just in Time**

Mr. DRT in Pepperell, Massachusetts, writes:

"Thanks for a most interesting and informative article regarding US AF 'Coronet' deployments in the Utility World column. Your article seems to have been written at a very appropriate time for me considering the fact that I am listening to a 'Coronet' mission as I write this, not more than three days after getting my August issue of *MT*. Your article is most useful right now as I sit here recording the 'JJ' reports from 'Head Dancer' and decipher them using the information presented in your column.

"It was quite accidental that I even intercepted the 'Coronet' mission I am now monitoring since they are operating on 18003 kHz LSB which I assume is a discrete frequency for the mission."

Well, thanks, Mr. DRT; we aim to please here at Monitoring Times. Speaking of 'JJ' reports, reader Robert H. Langley of Atlanta, Georgia, says that his August issue was his first copy of *MT* and the "Coronet" segment also "caught his eye." His question, however, relates to the Strategic Air Command on HF. He has noticed that they often give messages to relay in a similar format to the ones I described as 'JJ' reports.

"I was wondering if you could tell me if SAC messages are formatted the same as the ones you described?"

Yes, Robert, some of the SAC messages that are passed from aircraft are in fact the same as the "JJ" format used by the "Coronet" missions. Take a piece of paper when you hear some of these aircraft reports on SAC and try plugging them into the "JJ" format; you might be pleasantly surprised at the results.

**Soviets Revisited!**

Todd K. Shideler would like to pass along a correction to one of our recent logs in the September issue of this column. A listing was sent for the frequency 12521.4 stating that the Soviet reefer ship SHKVAl (UHYW) was providing position reports off the coast of Liberia.

He further says that in actuality, the SHKVAl is a Soviet naval guided missile corvette. It belongs to the Nanuchka I class, and has a maximum speed of 30 knots. These ships, which are reported to be sea-going vessels, carry a number of weapons including sea-launched nuclear cruise missiles.

Besides other information, this is contained in the *Guide to the Soviet Navy*, 4th edition, by Polmar, and in the 2nd volume of the *Neptune Papers*, put out by the Institute for Policy Studies in Washington, DC.

I would like to thank you, Todd, for passing that along and I am flattered by your letter and hope that your group continues to enjoy Utility World. How about some HF information from you all sometime?

**General Mailbag**

Bob Perkins in Artesia, New Mexico, wrote to say he enjoyed the segment on the USAF Regional Broadcast we did recently. He did have a question about decoding the RTTY meteo information he is hearing on 11120 kHz from Elk Horn. "Can you recommend a book that covers the abbreviations and formats used in these broadcasts?"

Certainly, Bob. You need to get a copy of the *Air and Metro Code Manual* published by Joerg Klingenfuss. It is available from several of our advertisers in *MT* that carry utility books. It should cover about any question you would have on Meteo codes and abbreviations.

Finally, Paul DeWitt would like to know if any of our readers have any frequency information on Little Rock/Jacksonville AFB, Arkansas. If so, he would like for you to drop him a line with that information. You can write to Paul at 2402 Eloise Circle, Pine Bluff, Arkansas 71601.

Well, that's it for this month; time to see what you are hearing in the Utility World and a very Happy Holiday season from the Van Horn Family.
Utility World

Utility Loggings
Abbreviations used in this column

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<thead>
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<th>AM</th>
<th>ARQ</th>
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All times UTC, frequencies in kilohertz. All voice transmissions are English unless otherwise noted.

2230.0 Malta maritime radio service heard at 0805 in US. (T. Chirp, Malta). Welcome to the loggings column, hope you report often.

2514.0 Halifax Coast Guard Radio working UTMQ with phone patch traffic at 0115 in US. (Bob Doyle, Shelton, CT)

2625.0 Malta maritime radio service in US at 0852. (T. Chirp, Malta)

2670.0 NMF-USCG Woodshole, Massachusetts, working F/V Alpha Omega regarding an injured crewman at 0030 in US. Also heard NMB-USCG Charleston working the US M. Baker-NZH with a SAR at 0251 in US. (John Hurrelu, Abington, MA)

2694.0 USCG Cape Horn working CG Group Moriches, New York, with SAR traffic at 0353. (Battles, New Hampshire)

4640.0 Zulu 39 working Lima 15 with communications in US at 0440-0447. US Army convoy with traffic about K-rations for 780 men, etc. Somewhere in South Dakota. Other units heard included LTB56, K2W56, X8E. (Battles, NH)

4651.0 Marion Lake working Switcher Ops in US at 1348. Anyone got any ideas on this one? (Battles, NB) Not me, Bill –ed.

5054.0 Female 3/2 digit numbers station heard at 2315. Also monitored simultaneous transmission on 4600, but weak. continued until 2355. (Robert Hurley, Baltimore, MD)

5320.0 USCGC Point Arena (WBP-82345) working USCG group Hampton Roads, Virginia, in US at 2350 to test HF “Green” and SAR messages. (Battles, NH)

5696.0 USCG RADSTA Kodiak, Alaska, with a cutter or aircraft working base saying “We haven’t found him yet” in US. (Frank Duggan, Phoenix, A2) Time, Frank-ed.

6535.0 Airliner Aeroflot 8353 bound for Rio de Janeiro heard in US at 0628 working Dakar, Senegal, with a position report over RAKUD and an estimate for POLDA. (Halstead, WV)

6683.0 Fishing vessels working each other, no call signs, in US at 0140. USMC frequency is 6688 – kind of close, these guys should buy a Groove Frequency directory. (Battles, NH) Yeah, buddy, where is the Groove when you need them. –ed.

6750.0 Head Dancer Metro working Trenton Military with phone patch to Raymond Metro in US at 0423. Trenton advised to change freq to 6705 for AWACS frequency. The aircraft gave weather for stations 1-16 in succession over several minutes. (Battles, NH)

6757.0 5 Alpha November calling Pitkin? In US 0341. Sounded like RAF comms. (Battles, NH)

6761.0 Several tactical call signs heard on this SAC’s channel Quebe at 0518 in US. (Thomas Michols, Indianapolis, IN) Welcome to the column, Tom, you check me in often –ed.

6766.0 Hotel 70 working Hotel 72 in US at 0327. Listed as US Army by Grove Directory. (Battles, NH) Probably-ed.

6978.0 Female 3/2 digit numbers broadcast heard at 0248. (Hurley, MD)

7381.0 Thrasher working Wash Tub in US at 0415. Said testing Pacific Radio net on Whiskey 105. (Battles, NH)

7904.0 Single letter CW beacon “K” heard at 1710. (Chirp, Malta)

8404.0 UYEV-Soviet trawler Dmitry Povronov made heard in US at 0510 working OBY2 with a ship message south/82.2 west. (Halstead, WV)

8418.0 UTDX-Soviet spaceflight tracking ship Komaronaut Pavel Belyayev sending a service message for USF-Komaronaut Yuri Gagam indicating docking at Las Palmas, Canary Islands, in CW at 0030. (Sam Ricks, Philadelphia, PA)

8420.0 AYEH-Qalar registered M/V Trident Emeralitit made heard a position report for OBC-3 Callao Naval Radio, Peru, in CW at 0047. (Ricks, PA)

December 1989

MONITORING TIMES

8500.0 RDT-Moscow Naval Radio, USSR, with CQ CW marker at 0227. (Dix, NY)

8588.0 XVS-Ho Chi Minh City Radio, Vietnam, with a CW V marker to CQ at 1423. (Ken McKenzie, N. Delta, BC)

8616.0 HAR-Budapest Naval Radio, Hungary, heard at 0358 calling CQ in CW. (McKenzie, BC)

8719.1 USS Apache in US at 1300 with an urgent message to an unid station in US. (Larry Williams, Greenville, SC)

8789.0 Air Mauritius 422 working Beira, Mozambique at 1407 in US. Beira very faint. At 1409 working Mauritius Radio with a position report and SELCAL (EGF) check. (McKenzie, BC)

8899.0 The Steven S calling the Atlantic Vigor at 0342 in US -- no reply. (Williams, SC)

8965.4 MNM-USCG Portsmouth, Virginia, talking to Geronimo at 1145 about the condition of a woman picked up on a raft. Asked about type of raft and their ETA to Bermuda. (Dean Kraft, Hillsdale, IA)

9017.0 Agreeable working Day Coach in US at 1245. Requested he move to frequency Bravo 1111. Looks like we have another new freq ident. Larry. (Battles, NH) Yes, I think so, Bill –ed.

9023.0 Bandaw Gulf working Backburner at 1355 in US with scrambled traffic, was able to listen in to frequency setup on UHF 364.2 and modern traffic on UHF 318.4. (Doyle, CT) Bob, what mode did it sound like on 318.4? SAM 86972 working Trenton Military with phone patch traffic in US at 1544. (Battles, NH)

9032.0 Architect (Raf Strike Command) with NATO colors weather broadcast at 0303 in US. (Battles, NH)

9042.5 Female English four figure number station under the CW “K” beacon, both gone at 1559. At times this “K” beacon puts an extremely strong signal here. (McKenzie, BC)

9320.0 SAM 31683 working Andrews in US at 1340. (Battles, NH)

9996.0 RWM-Moscow Standard Time and Frequency station, USSSR calling CO (weird –ed.) at 0239 in CW then into time pips. (Doyle, CT)

10018.0 Delhi Air Radio working Bombay Airradio with the ETA of an Air India flight at 1401 in US. (McKenzie, BC)

10066.0 Colombo Airradio, Sri Lanka, calling, then working, Madras Airadio, India, positions with sedatives for aircraft. (McKenzie, BC)

10078.0 Frankfurt Airadio working Condon Papa Oscar at 0100 in US with phone patch in GG. (McKenzie, BC)

10390.0 Oscar 4 Whiskey calling Foctrot 3 Whiskey and Foctrot 3 Alpha for a radio check. Focotrot 3 Alpha acknowledged at 0540 in US. (Hurley, MD)

10478.0 Charlie Papa calling Delta Oscar at 0059 in US. Also heard CP calling HS, NM, OT, and JQ for radio checks. (Doyle, CT)

11180.0 Unid Chinese stations in two-way contact in US at 0019. (Normally a SAC/Andrews frequency here.) (Battles, NH)

12101.0 Delta 3 Juliet working CG COMSTA Miami in regards to Bravo 36 lost communications in US at 2355. (Battles, NH)

12250.0 Ben Hogan working Hedge Row and also called Mama Bear in US at 1806. (Battles, NH)

12556.0 Mike 3 Alpha working Overwork with authentications in US at 0206. (Battles, NH)

12730.0 German female numbers station heard at 1910. (Chirp, Malta)

12810.0 Goll 5 November working unid station in US at 1521, bad transmitter, terrible modulation. (Battles, NH)

13100.0 Sana Air Radio, Yemen Arab Republic calling Jeddah Radio, called three times with no reply at 1456 in US. Also heard Adis Ababa Radio, Ethiopia, working Yemen Air 5228 and tells 5228 go to 7595. Nothing heard on 7595. (McKenzie, BC)

13300.0 Tripoli Airadio, Libya, working Mumba 495 at 0035 in US with a position report and SELCAL check. (Doyle, CT)

14127.0 SIK4 from MRV6 and JSWW from MRV6 in CW at 0204-0212. (Dix, NY)

14194.0 Air Force One working Andrews AF in US at 1455 with traffic. Also heard Shad Rock working Pork Fry on Sierra 311 at 0500. At 0506 heard Ambush working Singhsol. Must be a multi-use frequency by Mystic Star/SAC/DEA/Customs agencies. (Battles, NH)

15155.0 Unid station working Lobo 145 with license plate traffic, also noted data burst in US at 0334. (Battles, NH)

15225.0 UMWX-Soviet icebreaker Nil Otto Schmidt with TESAC weather
observations for the North Sea, Murmansk, and Moscow Hydromet weather centers at 0311. Ship located off Cape Farewell, Greenland, in the Labrador Sea. (Ricks, PA)

12605.0 Soviet T/H Ledoga B (no call sign heard) in CW at 0547 with a service message for Leningrad, Message advised a QTO (left port) of Antwerp on May 31 at 0000 bound for Rostock (GDR). (Halstead, WV)

12621.0 UOTV-Soviet M/T Leninov heard in CW at 0539 working NMN with an OBS message for Washington, DC. Located 23.6 north/69.7 west. (Halstead, WV)

12627.0 UGWS-Soviet T/K Lyublino heard in CW at 0624 working ULA with three messages for Nororossiysk. Santyago (Santiago de Cuba?) mentioned in text. All messages signed Qablenko. (Halstead, WV)

12678.0 9MB-Penang Radio, Malaysia, heard at 1049 with a CW CW marker. (Dix, NY)

12698.0 Uniform 7 Quebec calling Sierra 5 Bravo at 1412, no reply. Still calling at 1518 in USB. (Mckenzie, BC)

12707.0 9VG34-Singapore Radio, Singapore, with a CW marker at 0855. (Dix, NY)

12714.0 Male 9VG34-RTTY/Morse decoder, tuner, audio filter, speaker, clock and tape recorder -- "a lot of performance in a limited area."

Neal Perdue of Alabama says don’t scoff at “armchair DXing.” Next to his chair he keeps a modified Sony ICF-6500, an AEA MBA-RC RTTY/Morse decoder, tuner, audio filter, speaker, clock and tape recorder -- "a lot of performance in a limited area."

Thanks, Mr. UK. (Battles, NH)

16050.0 RCE54-Moscow, USSR, heard at 1446 with TASS news in English. RTTY 425/50R. (Blair, CA)

16140.0 RGW28-Moscow, USSR, heard at 1453 with TASS news in English. (Blair, CA)

16224.0 3MA35-Taipei, Taiwan, heard at 1512 with CNA financial news in English. RTTY 850/50N. (Blair, CA)

16701.5 UJKE-Soviet refrigerated cargo ship Pitbol heard 0103-0111 with traffic to undi in RTTY 170/50N. (Blair, CA)

16703.0 UJPL-Soviet research ship Akademik Golitsyn heard at 0205 with traffic to UVA-Batumi. Also heard at 0256 with traffic. RTTY 170/50. (Blair, CA)

16820.0 The ocean liner Steethoven working WCC in USB at 1759 with a message for a Tokyo firm. (Brian Jones, San Antonio, TX) Welcome to the column, Brian. Please report often-ed.

16948.0 RCV-Moscow Naval Radio, USSR, calling UGDJ in CW at 1656. (Dix, NY)

16957.7 FJJ-Noumea French Naval Radio, New Caledonia, with V CW marker at 1415. (Dix, NY)

16970.0 URD-Leningrad MORFLOT Radio, USSR, with TASS world news, sports and weather in Russian at 1415 in RTTY 170/50. (Ricks, PA)

17018.0 EBA-Anaranjado Radio, Spain, with a CW CW marker at 1618. (Dix, NY)

17215.5 WLO-Mobile Radio, Russia, transmitting an off-shore weather forecast in CW at 0047. (Lance Micklus, Essex Junction, VT)

17519.0 Unid FEMA station testing a data circuit in USB at 1900. (Williams, SC)

17521.0 HSW61-Bangkok, Thailand, with coded meteor and weather in English. RTTY 900/50N at 1608. (Blair, CA)

20085.0 IXQ20-Rome, Italy, heard at 1522 with ANSA news in English. RTTY 350/50N. (Blair, CA)

20124.0 Missionary working Protocol in USB at 1815. Said using the wrong RTTY modem. (Williams, SC)

20192.0 NASA mission control with space shuttle countdown, launch, and liftoff in LSB at 1236. (John Gibert, Shawnee Mission, KS)

20381.0 CAK-Santiago Chilean Air Force Radio, Chile, heard with RYRY, DE CAK and coded meteor. RTTY 850/50N at 1609. (Blair, CA)

21791.5 NBA-U.S. Naval Radio Balboa, Panama, heard with R YRY and DE NBA to CKN. RTTY 850/50R at 1648. (Blair, CA)

22431.0 PKX-Jakarta Radio, Indonesia, heard at 1638 with a CW CW marker. (Dix, NY)

23972.0 JMG-Tokyo, Japan, with warnings about a typhoon in English. RTTY 850/50R at 1722. Could call sign be JMG?? (Blair, CA) Art, if very well could be registered with the ITU as JMG? and they only send out a generic tape on messages. I’ve seen this work many different ways. Depends on the station-ed.

MONITORING TIMES December 1989
Holiday Gift Buying

During this Christmas season, be honest with yourself. There won't be an ICOM R-7000 under your tree. And you can forget about receiving a PRO 2004 or 2005. Think back to last year. How many scanning items did you unwrap on Christmas morning? This year it won't be any different.

Your mother-in-law will give you a slobbering kiss on the cheek and your "Aunt Emily" will gift wrap another pair of socks. Other members of the family will follow their usual tradition of worthless gift giving, and when it's all over, your end of the tree will look like a rummage sale.

As scanner buffs, very few people understand us. Even fewer of our friends and family understand our equipment. If you told Aunt Emily that you wanted a PRO 2005, she'd probably get you a toothbrush.

What you need this holiday season is a list that explains exactly what you want, where to get it, and how much it costs. Does that sound "tacky"? If so, think about it for a moment. Which of the following would you prefer? A five dollar pair of socks or a five hundred dollar scanner? And wouldn't you be making their holiday shopping much easier by giving everyone a list?

Of course, making up the list can be a difficult and time consuming task. During this busy time of year, most folks can barely find time to address Christmas cards, much less compile a personalized shopping list.

That's why I made the list for you. All you have to do make a couple of dozen copies of this page, circle what you want and then pass it out. One copy should be posted on the refrigerator door.

All of the manufacturers are reputable firms and most of them have provided prizes for our popular Treasure Hunt. If the item was featured in my column, the month and year of the issue is listed for your review.

CHRISTMAS WISH LIST!!!

1. Ace Communications -- Indianapolis, Indiana, 800-445-7717
   Scanner Radio-AR-950 mobile rig, $299.00
2. Benjamin Michael Industries -- Schaumburg, Illinois, 312-884-7077
   Nitelogger automatic tape saver, $49.95
3. CAE Incorporated -- Hamburg, Michigan, 313-231-9373
   Littlite dimmer controlled lamp, $49.95 (October 89)
4. Capri Electronics -- Bayfield, Colorado, 303-884-9084
   TD-17 Bug Detector, $98.00 (April 89)
   ScanRecord automatic tape saver, $47.00
5. Electron Processing -- Medford, New York, 516-764-9798
   TS-1 Tape Saver automatic reading device, $49.95 (May 89)
6. Grove Enterprises -- Publisher of Monitoring Times magazine
   800-438-8155. Orders from Grove are usually delivered within three working days.
   Scanner Radio-Pro 2005, $389.00 (June 89)
   Scanner Radio-ICOM R-7000, $1020.00
   Antenna-Scanner Beam, $49.00
   Wideband Preamp III, $45.00
7. Naval Electronics -- Tampa, Florida, 813-885-6091
   HT Audio Booster, $29.95 (January 89)
8. Optro Electronics -- Fort Lauderdale, Florida, 800-327-5912
   Frequency counter-1300H/A, $170.00 (Feb and Oct 89)
   Discone Antenna-Professional grade, $100.00 (August 89)
10. Radio Shack
    BNC Solderless Connectors, $2.59 #278-104
    BNC right Angle Adapter, 4.59 #278-116
    BNC to SO 239 adapter, 2.49 #278-120
    BNC male to female "F," 2.99 #278-251
    BNC male to PL 259, 2.59 #278-121
11. Universal Electronics -- Columbus, Ohio, 614-866-4605
    Coax-Seal moldable plastic, 60" x 1/2", $2.50 (August 89)

Okay, that's it. Hopefully, the list will inspire your nonscanning friends and family members to forget about socks and tee shirts. If the list helped to reduce your cotton wardrobe, I'd like to hear about it. Send your Christmas gift pictures and comments to the "Scanning Report," P.O. Box 98, Brasstown, NC 28902.

The Ideal Scanning Book

On today's market, scanning books are nearly nonexistent. Sure, there are plenty of frequency guides out there. But try to find a scanning book that captures and explains the thrill, excitement and intrigue of scanning. Better yet, try to find a book that places the reader behind a scanner radio and then explains how to monitor all of the action.

Since I couldn't find such a book, I wrote my own -- The Citizen's Guide to Scanning. The book is unique because it is written by a scanner buff. All the information you need to know about scanning is captured in one single, authoritative source.
Readers looking for specific, nationwide frequencies, will discover a numerically arranged list running from 29 to 1000 MHz (It's also a great way to help identify some of those unknown transmissions you're picking up.) A second frequency guide is arranged alphabetically and offers a quick and convenient way to locate a specific agency.

The Citizen's Guide to Scanning retails for $12.95 plus .90 books rate or 2.00 UPS. It's available from DX Radio Supply, P.O. Box 360, Wagontown, PA 19376 and from other fine radio stores.

MT Treasure Hunt

Don't be alarmed. The Treasure Hunt will resume with the January 1990 issue! I simply needed a little time to sort through the mounds of mail, notify the winners, and to line up the prizes for next year.

Here are the individuals that won the HTS-1 Audio Boosters: In June, the winner was Joe Nooney of Valatie, New York. In July, another HTS-1 Audio Booster went out to Monitoring Times reader Rich Kramer of Reading, Pennsylvania. The Supercone Antenna for the August/September Treasure Hunt was won by Karl Ayer of Mequin, Wisconsin. Congratulations to our three winners. And best of luck to everyone for the all new, 1990 series of Scanner Report Treasure Hunts!

Frequency Exchange

Going to Florida this winter? If so, don't forget to warm up your scanner radio with the following frequencies:

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>460.050</td>
<td>Fort Lauderdale Police F-1</td>
</tr>
<tr>
<td>460.100</td>
<td>Fort Lauderdale Police F-2</td>
</tr>
<tr>
<td>460.125</td>
<td>Fort Lauderdale Police F-3</td>
</tr>
<tr>
<td>471.1125</td>
<td>Broward County EMS F-1</td>
</tr>
<tr>
<td>471.1375</td>
<td>Broward County EMS Car to Car</td>
</tr>
</tbody>
</table>

These are Scott Glicker's favorite frequencies. Scott lives in Tamarac, Florida, and he has asked if anyone can supply him with the freshwater Fish and Game Commission frequencies for his area.

Since the weather is warm, let's stick around and visit with another Florida resident: Jody Gresham lives in Lakeland, Florida, and has provided the following:

MacDill Air Force Base

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>269.100, 279.600</td>
<td>Departure</td>
</tr>
<tr>
<td>275.800</td>
<td>Ground Control</td>
</tr>
<tr>
<td>294.700</td>
<td>Tower</td>
</tr>
<tr>
<td>173.5875</td>
<td>Crash Crew Narrow Band FM</td>
</tr>
<tr>
<td>349.000, 377.100, 307.300</td>
<td>Miami Center</td>
</tr>
<tr>
<td>377.200</td>
<td>Jacksonville Center</td>
</tr>
<tr>
<td>286.400</td>
<td>Avon Flight Bombing Range</td>
</tr>
</tbody>
</table>

Eglin AFB F-15s North Gulf Flight

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>261.000, 271.200, 287.500, 301.700, 311.200, 351.300</td>
<td>Crash Crew Narrow Band FM</td>
</tr>
</tbody>
</table>

Ready for colder climates? Okay, I'll give you one more warm weather visit. But be warned; after we visit San Antonio, Texas, grab your jacket!

John Carr has provided over 400 frequencies for the San Antonio area. Here is a sample of what I have:

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>139.650, 140.425</td>
<td>Brooks AFB Laser Range</td>
</tr>
<tr>
<td>155.055</td>
<td>San Antonio College Security</td>
</tr>
<tr>
<td>155.235</td>
<td>Gold Cross Ambulance</td>
</tr>
<tr>
<td>154.5150</td>
<td>City Armored Car</td>
</tr>
<tr>
<td>159.800</td>
<td>Loomis Armored Car</td>
</tr>
</tbody>
</table>

Everything You Ever Wanted To Know About Scanning...

It's the first complete, comprehensive soup-to-nuts scanner book written for the serious scanner enthusiast. For the person who wants more out of his scanner than police and fire. From a "how to get started" section for newcomers to Bob Kay's "masters" tips on how to get the most out of your radio, Citzen's Guide to Scanning has it. Includes an exhaustive frequency allocation section that tells you who is on the radio and where you can hear them.

Citizen's Guide to Scanning is available from DX Radio Supply for $12.95 plus 2.00 UPS or .90 book rate, P.O. Box 360, Wagontown, PA 19376.

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www.americanradiohistory.com
To end this month’s Frequency Exchange, we follow the cold winds to Fort McCoy, Wisconsin. Daryl Symington of Holland, Ohio, hopes that his list will help warm our ears:

Fort McCoy, Wisconsin, Army facility

38.5000 AAF Tower primary
41.7000 AAF Tower secondary
41.9000 Range Control F2
48.8000 Range Control F1
163.5025 Range Control
165.0875 MPs
165.1875 Fire Department
229.4000 AAF Tower secondary
241.0000 AAF Tower primary
241.1000 Airfield spare
247.4000 Range Control F3
363.8000 App/Dep

Volk Field, Wisconsin, ANG facility

34.2000 Hardwood Range

Oldies but Goodies

Anyone out there know how to program a Regency Model Z-60 tabletop scanner radio? Ron Stanley of Herndon, Virginia, can’t seem to figure out how to do it. If you send the instructions to me, I’ll pass them along to Ron.

Cordless Invaders

In Dixon, Iowa, Richard Berodt picked up his cordless phone and was surprised to hear his neighbor, Scott Tyler, merrily chatting away. Naturally, Rich was both surprised and somewhat curious. After a few days of “monitoring” Scott’s conversations, Rich learned that his neighbor was a “con” man who had bilked two food distributors out of $35,000.

Rich then called the Sheriff’s Department and invited several deputies over to listen in. To make a long story short, Scott Tyler was eventually convicted of theft.

Well, Scott appealed. He charged that his privacy had been invaded when Rich monitored his cordless conversations. The 8th U.S. Circuit Court in St. Louis ruled that Scott Tyler did not have a “justifiable expectation of privacy when using a cordless phone.”

Can you imagine the trouble that Rich could get into if he had a scanner radio and a copy of Monitoring Times? (News clipping provided by William W. Stegall, Granite City, Illinois.)

Traffic Radar Hazards

A Wisconsin State Trooper was forced into early retirement due to the loss of his right eye. The eye was removed because of cancer, and the trooper claims that the cancer was caused by the radar unit that was mounted inside his squad car.

The trooper’s findings are supported by numerous agencies and individuals that have just begun to study the hazards of low level microwave radiation.

Boy, first it was power lines, CRT terminals, computers, and now radar guns. I wonder how long it will be before someone determines that scanner listening is bad for our health?

Cordless Phone Antenna

In the March 89 issue of MT, I explained how to construct a cordless phone antenna. A lot of you sent in your SASE and requested additional information. Still others wrote in and asked if I could personally recommend a commercially available antenna that worked well on the cordless bands.

My two favorite antennas for monitoring both cordless phones and baby monitors are the Grove “Scanner Beam” and “Sky Wire.” Now, I’m not just saying that because I write for Grove. If either of these two antennas didn’t perform well, I wouldn’t recommend them.

With the aid of an inexpensive television rotor, I can easily

December 1989

MONITORING TIMES
“aim” my Scanner Beam at cordless signals that are within three blocks of my home. The best reception of cordless phones occurs on rainy evenings -- I’ve logged cordless phones several miles from my home.

Although the Sky Wire is primarily used for shortwave listening, I discovered that a horizontally mounted Sky Wire does a fine job of capturing cordless signals. The Sky Wire will also produce a very clean cordless signal that was otherwise quite noisy when monitored on the Scanner Beam.

For the ultimate in cordless monitoring, I combine both antennas into a high isolation A/B switch that allows me to quickly access the antenna providing the best signal.

News from Down Under

Remember the old days when CB was alive and kicking? It was the mid-nineteen seventies and nearly everyone had a CB at home or in the car.

If you would like to relive the CB era, take a trip to Australia. CB is alive and well in the land down under. CB Action is Australia’s only scanner/CB radio hobby magazine. Russell Bryant, who is editor of CB Action’s “Scanning Column,” recently sent me several copies of the magazine. After looking through the pages, I was surprised to learn that, in addition to the regular CB channels, Australia also allows CB activity on 477 megahertz -- they call it UHF CB. And better yet, the range of UHF CB is extended using repeaters.

When I got to the scanning section of CB Action, I was in for a few more surprises. When Russ prints frequency listings, he uses commas instead of decimals. For example, the ambulance rescue squad in Sydney, Australia, operate on 76,640 and 84,480 MHz.

Here in the U.S., we are accustomed to seeing these frequencies as 76.640 and 84.480 MHz.

The band plan in Australia also differs from ours:

- 30 - 50 MHz Low band VHF
- 60 - 86 MHz Mid band VHF
- 108 - 118 MHz Air Navigation band
- 118 - 136 MHz Air Communications band
- 148 - 174 MHz High Band VHF
- 250 - 400 MHz Military UHF
- 400 - 470 MHz Low band UHF
- 470 - 520 MHz Mid band UHF
- 800 - 950 MHz High band UHF

Scanning in Australia is just beginning to become popular. As Russ pointed out in his column, many dealers have never seen a scanner radio, and they become further confused when the scanner radio is described as a programmable VHF/UHF receiver.

Russ, I’m sort of jealous. What fun it must be to live in a place where the CB action is hot and the scanning action is just beginning -- have you got a spare room?

Christmas in the Soviet Union

Although I came on a little strong in my opening of this month’s column, I do realize the true meaning of Christmas. However, I often forget the little things that make life enjoyable.
The Secret to Hearing More

Some of the really "big" DXers -- people's whose names you see next to those really exotic loggings -- don't have rooms filled with radio gear. Many have rather modest equipment.

How they do it is no secret. It's the antenna. Even inexpensive radios can be coaxed into producing big-dollar results -- if you use the right antenna. Ten Easy Shortwave Antennas is written for the person who wants those big dollar results.

There's no theory to wade through in Ten Easy Shortwave Antennas. In fact, there's very little technical about the book. All you do is decide which antenna is best for you (each has a description of size and purpose), pick up the parts listed in the shopping list (each part has a Radio Shack part number so you can buy it at your local store) and then follow the step-by-step directions.

Ten Easy Shortwave Antennas is perfect for anyone who wants to get more out of his receiver -- without spending a lot of money. It's available for just $5.99 plus 2.00 UPS or $30 book rate from DX Radio Supply, P.O. Box 360, Wagontown, PA 19376.

New Twist to Hamming

Tired of jawboning with another faceless voice? Put a new spin on the revered old hobby of hamming with AEA's new FSTV-430 Fast-Scan TV Transceiver.

With the FSTV-430, you can send a live color transmission of yourself, your shack, your family, whatever -- at a level that reportedly rivals broadcast quality.

All you do is connect the FSTV-430 to the video output of a video camera and presto, you're able to transmit and receive live or taped videos. The only license required is technician or higher. For more information, contact your local AEA dealer.

The D3W WARC Dipole

Cushcraft is now offering the D3W World Ranger dipole for hams working the new 30, 17 and 12 meter WARC bands. The D3W is a sturdy, rotatable dipole that is easily mounted on the mast along with your existing tri-band or other antennas.

It features high performance, high Q traps, heavy wall tubing and rugged stain-

less steel hardware. According to Cushcraft, the D3W will exhibit "superior performance compared to stationary wire dipoles and is rated for 200 watts P.E.P."

You can get your D3W from Cushcraft dealers worldwide.

Directory of DX Awards

Intended primarily for hams, many of the contests listed in the new K1BV DX Awards Directory will be of interest to SWLs as well. Compiler Ted Melinosky notes which awards are also available to SWLs.

For example, the International Short Wave League Program (England) sponsors an array of awards, many of which are solely for SWLs. Or, work (or hear) stations in the Hochsauerland (Germany) area and get a diploma! Form the word "SHOGUN" from six letters from the suffixes of stations from six different countries and get a

line control telemetry.

There is also a dedicated group of stalwart souls who communicate by radio in the 160-190 kHz range; you can do it, too -- no license is required! Ken Cornell's Low and Medium Frequency Scrap Book tells you all about it.

Cornell's book is not limited to describing low frequency, however; it is a how-to book, loaded with illustrations and schematic diagrams of antennas, transmitters, test equipment, receivers and other useful instruments for LF applications.

If you have any interest in becoming involved in LF experimentation, start by reading Cornell's standard reference for lowfers -- The Low and Medium Frequency Radio Scrap Book, Sixth edition, available for $16.95 postpaid in the U.S. from the author at 225 Baltimore Ave., Point Pleasant Beach, NJ 08742.
colorful award from Japan!

Over 1000 separate awards and certificates: If you like shortwave contesting, this compendium is indispensable. To order, send $15.50 to Ted Melinosky at 525 Foster St., South Windsor, CT 06074-2936)

Ham Regulations

Fred Maia, W5YI, is one of the most prodigious amateur radio proponents of our generation. His publishing firm puts out two excellent newsletters a month (The W5YI Report), license study materials and other publications, as well.

Amateur radio in the United States faces an uncertain future; hams have been losing frequencies to business radio services and their ranks are not growing.

Maia’s reprint of the new FCC Rules and Regulations: Part 97 governing ham radio is prefixed by an explanation of how times and technology have changed over the years, forcing the Commission to streamline the obsolete Part 97 references concerning logs, swap nets, interference, equipment specifications, time periods, testing and more.

For only $2.95 every amateur and every ham hopeful should latch on to a copy and read it thoroughly. And, while you’re at it, Maia has a 16-page pamphlet on “How to Administer Novice Examinations in the Amateur Radio Service” and it’s only $1. Get both and give amateur radio a boost by supporting Maia’s dedicated—and very effective—efforts toward revitalizing ham radio in America!

FCC Part 97 (Amateur Radio) Rules and Regulations is a 56 page booklet available for $2.95 postpaid from W5YI, PO Box 565101, Dallas, TX 75356.

Two new Guides

While “official” may be a little pretentious, the latest Official New Hampshire Scanner Guide and Official Massachusetts Scanner Guide are certainly informative. The new fourth edition of the New Hampshire directory includes over 7,000 listings, up more than 1000 from the previous edition, while the new third edition Massachu-
Tape Tribulations

As I look back, I discover that I have been writing semiprofessionally for about five years now. In that time I have taken my task seriously enough to read several prominent books on the subject of writing, especially writing for money!

Most of these texts cover essentially the same ground. They represent lists of things that writers should never do if they ever hope to see their verbiage published. Most noted in these lists is one very famous sentence that has gone down in history as the one sentence that should never never never be used to begin a story.

**Please don't do it, Uncle Skip!!!**

I can't help myself. I have no choice. Brace yourself, Larry Miller, here it comes.

IT WAS A DARK AND STORMY NIGHT! 17 January, 1982, to be exact. I was very deep into AM Broadcast Band DXing in that period of my life. On this particular dark and stormy night (didn't think I'd have the nerve to say it twice, did you?) I was camping my receiver on 970 kHz. I was using a four foot box loop antenna to null out WWSSW, Pittsburgh, Pennsylvania, in order to catch the new ID of station WAVG, Louisville, Kentucky (they had recently changed call letters from WAVE).

At 23:00 EST I had nailed the ID and was about to move the dial to fresh fields when all of a sudden, booming through unexpectedly on that dark and stormy night (arrgh!!!) came the signal, with a full station identification, of WYNZ, Portland, Maine, and with that I was able to log my thirtieth state on AM BCB.

When I initially reported the events of that dark and stormy night to some fellow listeners, they were quick to pooh pooh my tale. That is, until I played the tape of this event for them. Once again Old Uncle Skip's DX reputation was saved by the tape recorder. And in spite of my gross oversize of that dreaded I WADASN sentence, what could be a better lead in for . . . (Let the trumpets sound!)

**UNCLE SKIP'S GUIDE TO DX TAPE RECORDING**

Tape recording your listening sessions can serve dozens of purposes far more important than proving your DX prowess to other hobbyists. Settle back, Bunkey, while we examine a few.

**Improved hearing**

Using a tape recorder is like having an infinite number of listeners helping you dig out your DX. By playing a tape over several times you will pick up details that will allow you to generate a more accurate QSL report. The human voice seems to move along far too quickly when you are trying to take in what you are trying to get the exact wording of a station ID or pick up details from a program like Glenn Hauser's "SWL Digest" on Radio Canada International, a tape recorder in line is the only way to go.

Many DXers invest in audio filters in order to clean up signals that would otherwise be hard to discern. A common mistake that many beginners make is to just listen to their receiver through their filter. The problem with this plan of attack is that the filter might just be adjusted in such a way as to accidentally filter out the very signal you are so desperately seeking.

The easy fix is to make sure you have Mr. Tape Recorder chugging along in line before the filter. This way, if you miss something due to fumbling filter fingers (a common malady among even the most experienced monitors) you can review the unfiltered tape and even run the tape through your filter as many times as your little old heart desires. You can experiment with various settings until you hear what you are looking for. As long as it's down on tape, you've never missed it.

Even if you can't spring for a filter at this point in your pocketbook, playing a tape over a few times will sometimes surface things you simply didn't hear the first time around. I know of dozens of monitors who found something more exciting "unheard" when they were originally listening for. This is especially common in BCB DXing on local (Graveyard) frequencies or monitoring any network operation on the utility and ham bands.

VHF Scanner listeners don't need to feel left out because you will be able to use the tape recorder to capture those bizarre openings that are caused by atmospheric ducting and meteor showers. These openings are often quick and brief. A recorder will catch that once in a lifetime opening and save it for years to come.

Not everyone is a language scholar. You can tape that exotic station and then track down somebody who speaks the language to help you figure out what you have caught. A trip to a nearby college language department should bail you out and maybe even give you a QSL letter to send as well.

And who among you out there in monitorland cannot recall a time when you fell asleep at the controls? Murphy's Law indicates that the moment you rest your head on your operating desk, Radio Nibi Nibi, not heard in North America in twenty years, will boom through with armchair copy. If you had the tape recorder going, you just might have caught it even though you are well on your way to dream land. The same rule can be applied for all those times you had to run to answer the telephone, too.

Tape recorders can also archive important events in history. Somewhere around my shack I have a tape of "Argentine Annie," the propaganda broadcaster from the Falkland Island conflict. This kind of thing doesn't happen every day.

**Lest we forget the collectors**

Some people are drawn to radio monitoring because of interests in other related areas. To these folks, the tape machine is as essential as the receiver.

Language students are known to collect examples of dialects off the radio to further their study and prowess.

Music students can find all manner of programming worth committing to tape. I am certain more than one paper has been written or influenced by examples of music of some culture or another gleaned from shortwave listening. Playing back examples of music from around the world would make an excellent class project for a young DXer. It would also be a great way to introduce folks to the hobby.

Some listeners have made a hobby of collecting the various interval signals played over the air by shortwave broadcasters. These distinctive tone patterns are collected, traded and shared among many listeners.

And last but not least, it is fun to tape and collect "Spy Numbers" stations. It is also useful as a verification because these cloak and dagger types just don't QSL, Compadre!
A different kind of QSL

If you are trying to get a QSL out of a particularly contrary broadcaster, you might consider sending along a tape of what you have heard. This novel approach is often appreciated by station engineers and program directors as well. Many broadcasters would be grateful for a tape that indicated any interference on their signal. In the old days, stations only accepted recordings made on reel tapes. The invention of the low cost cassette recorder means that your standard cassette tape will be just as welcome in most cases.

Let's talk hardware

First of all, most modern gear has at least a headphone jack or perhaps even a special tape output jack. Either way, you are in business. The only significant difference between the two outputs is that the specialty tape output signal has a constant level so you won’t have to worry about where your receiver audio gain (volume) control is set during your listening session.

If you just have the headphone jack, you will want to hit the local electronic store and pick up a “Y” adapter to allow for continued use of phones or external audio filters while your tape recorder gobbles up the signal.

If your rig has no headphone jack, you will have to tap your speaker leads to get a signal. If you find yourself in this boat, it might be a good idea to write Old Uncle Skip for more details concerning this type of surgery.

As tape recorders go, any low cost standard mono cassette recorder with a jack for an external mike will do the trick. A helpful option is a tape counter which will allow you to note particular places on the tape for picking up pertinent data. Remember, my friend, you are not looking for superbutter audio quality here.

Low cost cassette recorders tend to have problems with high frequency response. This might send your neighborhood audio-phile into convulsions but for the radio monitor it ain’t no big thing, because the signals we are listening for tend to emphasize the lower frequencies anyway.

We can also get by with lower cost cassettes as well. However, I would shy away from any bargain basement tape that might not hold up under regular use. You just don’t have to buy those high end Type IV tapes that come wrapped in gold and silver to nail down your DX.

Hey, Buddy, got a patch?

Now all we have to do is get the signal from the rig to the recorder. This is done by a piece of shielded cable with appropriate jacks installed on either end. Patch cords are available commercially in many combinations of plugs, so finding one to meet your needs should not be too great a task.

Now when some folks out there in radio land try this hookup, they may find that the audio recorded plays back very distorted. To misquote an old TV show, “There is nothing wrong with your tape recorder!” It simply means that the audio level coming into the recorder is too high for the machine to handle.

If you find you cannot eliminate the distortion by reducing the receiver gain, you will need to purchase or build an Attenuating Dubbing Cord. Radio Shack sells such a cord for $3.39 under part number 42-2152. You can also roll your own out of a piece of shielded audio cable and a couple of resistors (see Figure 1).

You may have to experiment a bit with the resistor values but that’s half the fun. You really can’t hurt anything, so warm up the soldering iron and see what you can come up with.

Variations on a theme

As I have stated in past columns, some people utilize a stereo recorder using one channel to record the programming and the second channel to record a time signal station from a second receiver. This set up allows for dead accurate log/time information for your QSL reports. I suppose you could also use the second channel to dictate notes to yourself that would aid you in reconstructing your listening system (control settings, for example).

And, of course, if you happen to have access to two tape recorders, you might try to edit your catches down onto tapes that will serve as a permanent collection. It’s also fun to swap tapes with other DXers.

The variations are indeed endless. Use your imagination. Push the envelope. Who knows what you might tape on some DARK AND STORMY NIGHT!!!
Catch the Coast Guard

It's a simple motto. "Semper Paratus" means "always ready." If you live close to a major river, lake, or along the US coastline, you are probably within scanner range of the exciting communications of the United States Coast Guard. The United States Coast Guard can trace its history back to the 1700s and the beginning of the nation. But the organization is today a far cry from the schooners of yesteryear. Sleek cutters and modern aircraft pile up on the assets side of the Coast Guard's balance sheets. Table 2 provides information on some of the cutters and aircraft that are commonly referred to on Coast Guard frequencies. A modern communication system has also developed over the years.

A lot of the Coast Guard's activity can be found on VHF marine frequencies. Monitors should keep a close ear out on 156.800 MHz for emergency traffic and announcements of Coast Guard broadcasts. 156.800 is marine channel 16, the VHF marine distress and calling frequency.

Another channel to monitor is VHF marine channel 22, 157.100 MHz. The Coast Guard uses this channel to communicate with civilian vessels, for emergency operations, and for broadcasts of marine interest. VHF marine channel 83, 157.175 MHz, is the home of the coast auxiliary. Made up of reservists (weekend warriors), the primary mission of the Coast Guard auxiliary is to educate the public in general marine safety. While the Coast Guard can operate on almost any marine VHF channel in the range from 156.25 to 156.425 MHz, the following frequencies bear close watching for activity: 157.050, channel 21; 157.075, channel 81; 157.125, channel 82; and 157.150, channel 23. The VHF marine bands aren't the only place to hear Coast Guard activity, however. Like other federal and military agencies, the Coast Guard has discrete frequencies in the VHF-High Band and military aircraft bands.

Owners of programmable scanners that include the military aircraft band from 225-400 MHz will also want to check the following frequencies for CG activity:

282.8 (Search and Rescue) and the following air-to-ground channels: 237.9, 240.6, 275.1, 277.8, 285.0, 342.2, 381.7, 381.8, and 383.9 MHz. The mode used on these channels is AM.

Within the VHF-High Band, Coast Guard intelligence activity can be found on 165.0125, 165.3125, and 165.3375. An air-to-ground frequency commonly heard in this range is 164.300 MHz. The mode used on these frequencies is narrow-band FM.

One monitor in the New Orleans area reports the following frequencies in use: 165.2625, 165.3375, 171.2375, and 171.3375. In fact, the frequency 171.2375 turns out to be a cross-band repeater output channel. It repeats channel 16 in the VHF marine band.

Once you have located the active channels in your area, the next step is to figure out what the myriad of acronyms mean. Monitoring Times reader Sidney Goldberg in Brookline, Massachusetts, has sent along a few of these acronyms to help you decipher their meanings when listening to Coast Guard frequencies. These can be found in Table 3.

One way to check out if you are close to a major coast guard station is to check out Table 1 sent in by Mr. Goldberg. While this is not a complete list, this and the map of Coast Guard regions should give you a reasonable idea of where in the country to hear Coast Guard activity.

I would like to thank Sidney for some of the material used to prepare this piece on the US Coast Guard and Larry Van Horn, MT's super utility editor, for forwarding that material to me.

Reader Reports

Dennis Brown in Washington, DC, while recently checking the FCC files noted the Northrop Radio Services, Inc at Mojave, California, has been granted an experimental license. This license is authorized the use of 314.6 and 382.6 for "US government contract work."

While Dennis has no way of knowing the specific use planned for these frequencies by Northrop, monitors in the California area might find those frequencies interesting, now that the B-2 is flying. Thanks, Dennis.

A listener in Florida has passed along the following low band frequencies in use in Central America. Since we are now in the middle of the VHF low band skip season, monitors might want to take note of these channels in case they pop up while scanning:

Palmalola AB, Honduras: 30.05 (APs), 30.35
Honduran Military: 30.145, 30.285
US Army in Honduras: 34.3, 33.1, 41.0, 30.2, 31.7, 32.0, 32.6, 32.1, 36.9, 45.4, 31.8, 35.2, 30.0, 30.25, 30.4, 30.9, 31.9, and 31.1
Unknown military repeaters: 30.19, 30.335, 32.585, and 30.25 (30.39 input)

And with that I will close the door on this month's federal file. I would like to remind our readers that we want to hear from you. Your system profiles, call signs, codes and frequency lists are always welcome. Also, pictures, maps, and graphic material covering the subject area of this column are appreciated.

<table>
<thead>
<tr>
<th>US Coast Guard Districts and Activities Table 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st CG District: HQ-Boston, MA</td>
</tr>
<tr>
<td>RCC-Boston, MA</td>
</tr>
<tr>
<td>AIRSTA-Cape Cos, MA</td>
</tr>
<tr>
<td>AIRSTA-Albany, NY</td>
</tr>
<tr>
<td>COMLANAREA-Brooklyn, NY</td>
</tr>
<tr>
<td>2nd CG District:</td>
</tr>
<tr>
<td>HQ-St. Louis, MO</td>
</tr>
<tr>
<td>RCC-St. Louis, MO</td>
</tr>
<tr>
<td>5th CG District:</td>
</tr>
<tr>
<td>HQ-Portsmouth, VA</td>
</tr>
<tr>
<td>COMSTA-Portsmouth, VA</td>
</tr>
<tr>
<td>RCC-Portsmouth, VA</td>
</tr>
<tr>
<td>AIRSTA-Elizabeth City, NC</td>
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<tr>
<td>AIRSTA-Cape May, NJ</td>
</tr>
<tr>
<td>7th CG District:</td>
</tr>
<tr>
<td>HQ-Miami, FL</td>
</tr>
<tr>
<td>COMSTA-Miami, FL</td>
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<tr>
<td>RCC-Miami, FL</td>
</tr>
<tr>
<td>AIRSTA-Clearwater, FL</td>
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<tr>
<td>AIRSTA-Miami, FL</td>
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<tr>
<td>AIRSTA-Savannah, Ga</td>
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<tr>
<td>ACCEPT-Bronswick, PR</td>
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<tr>
<td>8th CG District:</td>
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<tr>
<td>HQ-New Orleans, LA</td>
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<tr>
<td>COMSTA-New Orleans, LA</td>
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<tr>
<td>RCC-New Orleans, LA</td>
</tr>
<tr>
<td>AIRSTA-New Orleans, LA</td>
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<tr>
<td>AIRSTA-Atlanta, GA</td>
</tr>
<tr>
<td>AIRSTA-Mobile, AL</td>
</tr>
<tr>
<td>9th CG District:</td>
</tr>
<tr>
<td>HQ-Cleveland, OH</td>
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<tr>
<td>RCC-Cleveland, OH</td>
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<tr>
<td>AIRSTA-Detroit, MI</td>
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<tr>
<td>AIRSTA-Traverse City, MI</td>
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<tr>
<td>AIRSTA-Chicago, IL</td>
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<tr>
<td>11th CG District:</td>
</tr>
<tr>
<td>HQ-Long Beach, CA</td>
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<tr>
<td>COMSTA-San Francisco, CA</td>
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<tr>
<td>RCC-San Francisco, CA</td>
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<tr>
<td>RCC-Long Beach, CA</td>
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<tr>
<td>AIRSTA-San Francisco, CA</td>
</tr>
<tr>
<td>AIRSTA-San Diego, CA</td>
</tr>
<tr>
<td>AIRSTA-Humboldt Bay, CA</td>
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<tr>
<td>AIRSTA-Los Angeles, CA</td>
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<tr>
<td>13th CG District:</td>
</tr>
<tr>
<td>HQ-Seattle, WA</td>
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<tr>
<td>COMSTA-Seattle, WA</td>
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<tr>
<td>RCC-Seattle, WA</td>
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<tr>
<td>AIRSTA-Port Angeles, WA</td>
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<tr>
<td>AIRSTA-North Bend, OR</td>
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<tr>
<td>AIRSTA-Astonia, OR</td>
</tr>
<tr>
<td>14th CG District:</td>
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<tr>
<td>HQ-Honolulu, HI</td>
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<tr>
<td>COMSTA-Honolulu, HI</td>
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<tr>
<td>RCC-Honolulu, HI</td>
</tr>
<tr>
<td>AIRSTA-Barbers Point, HI</td>
</tr>
<tr>
<td>17th CG District:</td>
</tr>
<tr>
<td>HQ-Juno, AK</td>
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<tr>
<td>COMSTA-Kodiak, AK</td>
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<tr>
<td>RCC-Juno, AK</td>
</tr>
<tr>
<td>AIRSTA-Sitka, AK</td>
</tr>
<tr>
<td>AIRSTA-Kodiak, AK</td>
</tr>
<tr>
<td>Headquarters US Coast Guard Washington, DC</td>
</tr>
</tbody>
</table>

40 December 1989

MONITORING TIMES

www.americanradiohistory.com
The main frequency coverage for this column are the federal freqs in the VHF lo-band, 138-144 MHz, 148-150.1 MHz, 162-174 MHz, and 225-420 MHz. I will entertain other frequency areas that you have found government and military activity on, however. Until next month...it’s time for a cubo and 73.

Frequently Heard US Coast Guard Acronyms Table 2

<table>
<thead>
<tr>
<th>Acronym</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIRSTA</td>
<td>Air Station</td>
</tr>
<tr>
<td>COMSTA</td>
<td>Communications Station</td>
</tr>
<tr>
<td>ELT</td>
<td>Emergency Locator Transmitter</td>
</tr>
<tr>
<td>EPIRB</td>
<td>Emergency Position Indicating Radio Beacon</td>
</tr>
<tr>
<td>ETA</td>
<td>Estimated Time of Arrival</td>
</tr>
<tr>
<td>ETD</td>
<td>Estimated Time of Departure</td>
</tr>
<tr>
<td>ETI</td>
<td>Estimated Time of Intercept</td>
</tr>
<tr>
<td>F/V</td>
<td>Fishing Vessel</td>
</tr>
<tr>
<td>HQ</td>
<td>Headquarters</td>
</tr>
<tr>
<td>M/V</td>
<td>Motor Vessel</td>
</tr>
<tr>
<td>OSC</td>
<td>On Scene Commander</td>
</tr>
<tr>
<td>OSE</td>
<td>On Scene Endurance</td>
</tr>
<tr>
<td>POB</td>
<td>Person On Board</td>
</tr>
<tr>
<td>POD</td>
<td>Probability of Detection</td>
</tr>
<tr>
<td>RCC</td>
<td>Rescue Coordination Center</td>
</tr>
<tr>
<td>SAR</td>
<td>Search and Rescue</td>
</tr>
<tr>
<td>STREP</td>
<td>Situation Report</td>
</tr>
<tr>
<td>SRR</td>
<td>Search and Rescue Region</td>
</tr>
<tr>
<td>SRS</td>
<td>Search and Rescue Sector</td>
</tr>
<tr>
<td>SRU</td>
<td>Search and Rescue Unit</td>
</tr>
<tr>
<td>T/SR</td>
<td>Tracking single-Unit return-Search of a trackline</td>
</tr>
<tr>
<td>TSN</td>
<td>Tracking single-Unit nonreturn</td>
</tr>
<tr>
<td>PS</td>
<td>Parallel track single-Unit search of large area, position of distress unknown</td>
</tr>
<tr>
<td>CS</td>
<td>Creeping line single Unit-Distress between two points</td>
</tr>
<tr>
<td>VS</td>
<td>Sector single Unit-Distress position known within close limits</td>
</tr>
</tbody>
</table>

The main frequency coverage for this column are the federal freqs in the VHF lo-band, 138-144 MHz, 148-150.1 MHz, 162-174 MHz, and 225-420 MHz. I will entertain other frequency areas that you have found government and military activity on, however. Until next month...it’s time for a cubo and 73.
Monitoring aero comms

Because of its availability on radios like the Sony ICF-2010, the 118.000 through 135.975 MHz VHF (AM) aero band receives lots of attention. People who otherwise would be unable to sample the thrill of aeronautical monitoring are able to check it out without having to make an investment in equipment.

If you are fortunate enough to own one of the popular radios that covers this range and live near an airport, try to monitor the approach, departure, and tower frequencies from 6 am to 9 am in the morning, and/or 4 pm until 6 or 7 pm in the evening. These are the busiest, and consequently most congested, time slots for commercial airline arrivals and departures.

Overnights (late nights through early morning) do not mean that Air Route Traffic Control Center frequencies are quiet. It’s just the opposite, as a matter of fact. Many commercial airlines have late night special (also called “cheaper”) flights.

In addition, the air freight carriers do most of their flying at night to and from their bases, and you can hear quite a few due to some air traffic being less heavy during the wee hours, and the controllers tend to be somewhat more informal. Just a few nights ago, this writer heard a controller at an Air Route Traffic Control Center and an air freight pilot carrying on a very serious conversation about their respective ham gear!

Even if you live many miles from an airport, you can still hear transmissions from aircraft to and/or from Air Route Traffic Control Centers (ARTCC). Since ARTCCs (Enroute Control) use remote communications air/ground sites, there are very few places in the country where you won’t be able to at least monitor pilots talking to air traffic controllers at these centers.

Even if you can’t hear the controllers’ end of the conversation, you will still be able to listen to the pilots talking. Keep in mind that the higher an aircraft is flying, the further the distance it can be heard on the ground. This is because VHF transmissions rely upon line-of-sight.

"But," you say, "how do I know what frequencies the centers use?" Not to worry – if you aren’t sure which ARTCC flights are using in your neck of the woods, drop me a line and I’ll be happy to forward this info to you.

Generally speaking, you can monitor Air Route Traffic Control Centers’ transmissions, as well as those of airport ATC Tower/TRACONS on the following VHF frequency allocations.

118.000-121.4 Utilized by both enroute centers and Tower/ TRACONS for air traffic control purposes.
121.600-121.950 Mainly used by ground control at airports.
123.675-126.800 Also utilized by Enroute Centers and Tower/ TRACONS for ATC.
132.025-135.975 Same usage as above.

Other noteworthy frequencies include 121.500 and its UHF counterpart (243.0). These are the international VHF/UHF distress frequencies.

ELTs, which stands for Emergency Locator Transmitter (which most aircraft carry as standard equipment) are usually set off by an impact. However, they have been known to activate for no reason at all and the pilot who has an ELT which has malfunctioned in this way is usually one very chagrined pilot. They have a very distinctive downswept tone and are programmed to broadcast in emergency situations.

Incidentally, the UHF frequency of 243.0 is the multiple times two of the VHF emergency frequency 121.50. Most ATC facilities – Air Route Traffic Control Centers, Airport Control Towers/TRACONS (TRACON is an FAA acronym for Terminal Radar Approach Control facilities, however, they also handle radar departures) and FSS Stations monitor the emergency frequencies on a continual basis.

122.000 through 122.975 are usually allocated to Flight Service Stations in most parts of the country. FSS facilities are also part of the FAA.

On these frequencies, you can hear pilots asking for weather conditions at their destinations, airport conditions, communications and navaid frequencies, giving PIREPS (Pilot Reports) to FSS Specialists which involve flying conditions related to weather and other matters, flight plans being filed and/or changed, FSS Specialists giving DF (Direction Finding information) to pilots who are lost or disoriented, and other interesting transmissions.

While Flight Service Stations are mainly utilized by General Aviation (private pilots), commercial airlines use them also.

123.025 Helicopters use this frequency for air-to-air communications.
123.100 This is a search and rescue freq utilized by the Civil Air Patrol, Coast Guard, and others involved in this type of operation.
123.125-123.425 Flight test – used by manufacturers of major aircraft components, this freq is also in use for airshows.
123.450 An unofficial "chit-chat" freq utilized by pilots, many of them with commercial airlines. Some extremely interesting and candid communications have been monitored by this writer here.
123.500-123.575 Flight Test and miscellaneous uses in different parts of the country.

The frequencies between 128.250 and 132.000 are allocated to the airline companies and enroute stations (ARINC, ATLANTA FLIGHT SUPPORT, etc.). The transmissions monitored on these frequencies can range from the truly frightening (pilot reports that they have a passenger who has gone looney tunes) to the hilarious (We’ll be at the gate at 2200; please have four giant pizzas waiting for the crew. They forgot to include meals for us

---

So Long, Piedmont

Piedmont Airlines has completed a gradual two-year absorption into USAIR. Throughout its history, Piedmont flew many different types of aircraft: DC-3s (they used the logo "Route of the Pacemakers"), Martin 404s, YS-11s, F-27s, 727s, and 737s. From early 1988 until late August of 1989, the airline even had flights to London utilizing 767s.

This was quite an accomplishment for a company that bore the unfortunate nickname of "Treetop Airlines" in the 1960s and early '70s. No longer. As a part of USAIR, Piedmont now ranks with the likes of Delta, American, TWA, Northwest and United.
on this flight." This transmission came from an obviously hungry airline pilot on behalf of his crew and himself!

Since many airline companies use call signs that are not familiar to newcomers as well as some of the experienced folks on the monitoring scene, here's a list of names you might hear and the companies to whom they belong:

DOMESTIC AIRLINES:

- ABEK: Airborne Express
- AMRAM: American Trans Air
- AMFLIGHT: Ameriflight
- Big A: Arrow Air
- BLUE STREAK: Jetstream International
- CARIB-X: Caribbean Express
- CACTUS: American West
- CLIPPER: Pan AM
- EXPRESS: Federal Express
- GRAND AIR: MGM Grand
- LATE NIGHT: CCAir Cargo
- SKY BUS: Skyfreighters
- TEE AIR: TransAir-Link
- SUNLINE: Sun Country
- TIGER: Flying Tigers
- TITAN AIR: Viking Express
- TRANSCON: Transcontinental
- UPSCO: UPS (Until mid-1988 they used the name "BROWN TAIL" for a call sign)

WASHINGTON EAGLE: Presidential

FOREIGN-BASED AIRLINES:

- ANZA: Ansett New Zealand
- ARPA: Air Panama
- ASIA: Japan Asia Airways
- ASPRO: Inter European
- BLUEBIRD: Finnavigation
- EL AL: Israel Airlines
- HOTEL INDIA: Hispania
- IBERIA: Spain
- JETSET: Air 2000
- LOT: Polish Airlines
- MALEV: Hungarian National Airlines
- MAROCAIR: Royal Air Maroc
- SPEEDBIRD: British Airways
- SPRINGBOK: South African Airways
- TAP: Portugal Airlines
- TOADOMES: Japan Air System
- UKAY: Air UK

Air Force One Delayed

According to Monitoring Times scanner equipment columnist Bob Grove, President Bush won't be flying in the new Air Force One, a modified Boeing 747 — at least not until sometime in the mid-1990s. An Air Force spokesman confirms the delay.

According to officials, the problem is due to continued engineering and technical difficulties at Boeing, particularly the wiring needed to support the craft's highly sophisticated electronic equipment. In all, the 747 will have some 1,260,000 feet of wiring as compared to a normal 747 which contains 585,000 feet of wiring.

Also, more stringent FAA rules mean that Boeing may have to put in additional fire warning and suppression equipment in the plane's cargo compartment.

Rain-Related Danger

According to NASA researchers, preliminary results from a series of high-speed ground tests indicate that heavy rain may reduce aircraft wing performance when it is most needed, during landing approach or take-off in the presence of a microburst storm, an important factor for pilots to consider while flying through severe storms.

A survey of commercial aircraft accidents and incidents related to severe storms prompted NASA to study the possibility of a heavy rain effect on aircraft safety and performance. Heavy rain is generally defined as a high-intensity, short duration rainfall.

Modern wings on commercial aircraft, optimized for economy, rely on a smooth, uninterrupted flow of air across the wing surfaces for maximum performance. Tests suggest that very heavy rain disrupts the airflow, reducing wing lift and performance.

The heavy rain research is part of a broad NASA-FAA airborne wind shear detection avoidance program begun in 1986.

More Air Traffic Controllers

As of June 1989, there were 16,436 Air Traffic Controllers working for the FAA. 9,905 of these are FPL (Full Performance Level) rated, which means that the remainder are Developmentals (controllers who are still in training) and Air Traffic Assistants. The goal for FY1989 (FY means fiscal year) was a total workforce of 16,800 controllers, including 10,300 at FPL rating.

There are at present 22 Air Route Traffic Control Centers, 454 Air Traffic Towers, and 214 Flight Service Station Facilities. That's one heck of a lot of places to be staffed 24 hours a day, 365 days a year on all three shifts by the number of Air Traffic Control Specialists mentioned above.

The controllers who are presently at full performance level are, for the most part, between the ages of 25 and 50. That's quite an age range. When asked about retirement, a lot of them will say that when they get their 20 years in, they'll quit. Most of them don't. They either go up the ladder into supervision, or stay on as a working controller for as long as they feel comfortable with it. As one Air Traffic Manager of an ARTCC told me, "I still consider myself a controller and always will!"

Happy Holidays to everyone and here's a verse for the season. Imagine what would happen if Santa Claus was given an inspection and checkride by the FAA:

Jolly Old St. Nicholas,
I'm from the FAA
I've been told that you have no transponder on your sleigh
Christmas Eve is coming soon
Now listen close to me
Get your sleigh transponder-rigged
Make sure it has Mode C!

In the next column, we will answer some of the most frequently-asked questions from readers. Until then, 73 and out.
Squeeze Play

When N3IK moved to a new apartment, his biggest problem was deciding where to put the ham shack. In a place so small that you could stand at the front door, reach out and touch the back wall, this was going to be a problem.

And there were other criterion to consider. No matter where the shack ended up, our award-winning operator wanted it to be easily accessible, fun to use, and yes, pleasing to the eye.

That's not to say that anyone in the N3IK household objected to the appearance of radios. Virtually everyone who lived at #7 Coax Street either was a ham or had a strong admiration of hams. In fact, so natural was the concept of ham radio that sometimes, when the family sat down to dinner, one person or another would inadvertently slip into Morse code, hammering out his version of the day's events with a salad fork.

N3IK was fortunate in another respect as well. All of his radios were of recent vintage. Only a few years ago, he had gotten rid of all his old boat anchors.

Unable to find a fellow ham who would pay for them, N3IK had wired a pair of headlights to the big radios and passed them off on an unsuspecting teenager by telling him that they were Volkswagens. (And while he didn't miss the orange glow they cast on the cinderblock wall of the basement where the old listening post was situated, he thought that he noticed the distinct jump in the heat bill once they were gone.)

So, packing the entire family into a rented SAAB, off the family went in search of a discount store. It was here that N3IK discovered the cheap pressed wood wall unit. Nice to look at so long as the plastic wood veneer didn't peel back, the total cost was only around $80.00. It took about an hour to put the shelves together, including the spot where large holes were drilled to allow the different units to be interconnected.

Sneaky Stuff

"A lot of families do not like to see radio gear sitting out in the open like mine is," says N3IK. An answer to this problem is illustrated by photo two and three. Photo two shows the unit in disguise, and photo three reveals the ham station. "The key and mike are concealed alongside the Heath Kit HW-101," confides Ike, "and then they can be moved to the table top when the rig goes into action."

Those of you who haven't been damaged too badly by RF will recognize the unit in photos two and three as a microwave/TV cart. This particular model was purchased at an unclaimed freight outlet for just $19.00! There were no modifications required as it is open at both ends and rolls easily from room to room.

"The only problem I find with this unit," says N3IK, "is the fact that the transceiver is too low for easy operating. However if it means having a station or not, it is a small price to pay!"

Nitty Gritty

Photo four represents about the ultimate in inexpensive rig hiding. (Tip: The HW-9 is located on the left hand side of photo A.) Can you guess where it is? That's right! It's in the Xerox paper box along with its friends, power supply, key and antenna tuner. "To put the rig in operation," says N3IK, "just take the equipment out of the box, lay it out on the kitchen table, plug it into the AC line and away we go!"
Old Time Gear

If your station consists of a transmitter and receiver of 1960's or earlier vintage, then a different approach must be taken. Those with sufficient capital might consider building a small 24' x 48' addition onto the house. Other may find it easier to simply locate the shack in a closet. "One of my stations was located in a clothes closet with a Viking Ranger sitting atop an NC-300," laughs N3IK. "An extension cord provided power and a high intensity lamp illuminated the writing/operating position."

If you must go this way, it will most likely be necessary to build a special table to fit into the closet space available. One of N3IK's friends, a fellow who lived over on RF Boulevard, went a step further and mounted a table to the inside wall of the closet with hinges. When he felt the urge to "ham," all he needed to do was to swing the rig out into the room to operate and push it back into the closet when he was done.

Another local ham who collects and uses older gear has recently acquired an entertainment center (a wall unit that was designed to house a TV, stereo system). His beautiful Hallicrafters SX-101 receiver, HT32 SSB transmitter and HT-33 amplifier fit conveniently into this unit and look great in his recreation room. A slide-away keyboard drawer (designed to allow a computer keyboard to be slipped under a standard table) provides a convenient operating desk top.

Antennas?

"Now I'm sure," admits N3IK a bit sheepishly, "that many of you are sitting around saying 'yeh, yeh, what about the antenna?' Well, there are some fairly easy answers to that question too!" Unfortunately, N3IK has run out of space. "We'll cover that in a future issue," he promises.

Radio Shack

Jim Grubbs, K9E1 has just produced an excellent book for newcomers to the field of Digital Amateur Radio communications. As you might expect, the name of the publication is Digital Communications with Amateur Radio.

Unlike every other beginners publication on digital communications, this one does not dump the novice into a world of protocol's, bits, parity, networks and jargon. Author Grubbs lays the groundwork one step at a time and thoroughly explains everything leading up to digital communications.

While the dyed-in-the-wool packeteer may feel the book is too simple, the fact is that this book is exactly what has been needed. It is a true guide into the world of digital communications, and will ease the way for those interested in packet.

Radio Shack and K9E1 get an A+ for this one. Price is $7.95 at your local Radio Shack store.

Space Shuttle

The Goddard Amateur Radio Club station WA3NAN in Greenbelt, Maryland transmits live air to ground communications for space shuttle missions on the following frequencies. 3.860 MHz (2200 - 1400 UTC), 7.185 MHz (1200 - 2200 UTC), 14.295 MHz (primary freq) 21.395 and 38.650 MHz (as needed) and 147.450 MHz on FM simplex. If you are in the Greenbelt, MD area and have ATV capability they also transmit on 439.250 MHz television.

Spread the word about this operation to your amateur and shortwave listening friends.

More on MIR

The logs of U2MIR show contacts with 1,143 amateurs in 42 countries.

Let's hope the crew on MIR soon finds time to continue their amateur operations.

Propagation

The fall saw somewhat lower sunspot numbers than previous months; however, by mid October conditions on ten and fifteen meters were absolutely superb. Expect more of the same in December and January.

FEES for Amateur Radio Licenses

A bill HR 3299 recently introduced into Congress wants to impose fees for amateur radio licenses.

Many amateurs see no problem with paying for a license. Normally I would agree that a modest fee would be appropriate. However, the fees would not go towards improving the state of amateur radio in this country but would instead go into the general fund to be spent by your "wise old congress-people" as they see fit!

For that reason I say -NO!!! If we must pay for a license then we should get a lot more for our money than has been the case to date.

Write your representatives in Congress and voice your opposition to HR 3299!

That about blows my space allotment for this month gang, see ya all next year. My best wishes to everyone for the Holidays, 73 - Ike, N3IK
ALASKA
KNLS, 11700 kHz. Full data color studio card, and personal letter from Beverly Jones, Follow-up Office. Received in 20 days for an English report and U.S. mint stamps. Station address: The New Life Station, Box 473, Anchorage, Alaska 99556. (Robert Landau, Secaucus, NJ)

AZORES
Lajes Global Radio/U.S. Air Force GCCS-CUW, 8967 kHz. Full data blue map QSL card with slogan, “Voice of the Mid-Atlantic.” Received in 19 days for a utility report, and return postage. Station address: c/o 1939 Communications Squadron, APO New York 09406. (Richard Allbright, Merced, CA)

BRAZIL
Radio Aparecida, 5035 kHz. Full data color station card, without verification signer. Received in 45 days for a Portuguese report and two IRCs. Station address: Fundacao Banda Geral de Comunicacoes da Republica Aerea, Avenida Getulio Vargas 185, CEP 12 570, Aparecida, Sao Paulo, Brazil. (Robert Landau, Secaucus, NJ)

CANADA
CBW-AM 990 kHz, Winnipeg. Partial data CBC-Winnipeg card. Verification signer, H. Dyson. Received in 18 days for an English report, Canadian mint stamps, and a self-addressed stamped envelope. Station address: P.O. Box 160, Winnipeg, MB, Canada, R3C-2H1. (Harold Froedge, Midland, MI)

COLOMBIA
Caracol Bogota, 4755 kHz. Partial data QSL card. Verification signer, E. Bejamoso. Received in 136 days for a Spanish report. Station address: Apio Aero 9291, Bogota, Colombia. (Nick Grace, Harvard, MA)

FRANCE
Radio France International, 17702 kHz. Full data scenery card of Paris, without verification signer. Received in 30 days for an English report. Station address: Boite Postal 9516, Paris, 75762 Cedex 16, France. (Robert Landau, Secaucus, NJ) (John Carson, Norman, OK)

GERMAN DEMOCRATIC REPUBLIC
Radio Berlin International, 11785 kHz. Full data color station card from the GDR Post Museum, without verification signer. Received in 24 days for an English report and one IRC. Station address: DDR-1160, Berlin, German Democratic Republic. (John Carson, Norman, OK) (Tom Mastalka, Cleveland, OH)

GERMAN FEDERAL REPUBLIC
Deutsche Welle, 9700 kHz. Partial data card “Satellite Transmission,” with “Tune In” magazine, without verification signer. Received in 94 days for an English report and one IRC. Station address: Postfach 100444, 5000 Koln 1, Bundesrepublik Deutschland. (Tom Mastalka, Cleveland, OH)

GREENLAND
XPH, Thule Radio/U.S. Air Force GCCS, 13, 201 kHz USB. Full data prepared form card. Verification signer, V.K. Received in 40 days for an English utility report, a souvenir postcard, and return postage. Station address: c/o Thule AB, APO New York 90023-6346. (Richard Allbright, Merced, CA)

NORWAY
Radio Norway International, 21705 kHz. Full data card view of “Starford C” offshore oil drilling platform, with illegible signature. Received in 21 days for an English report. Station address: 0540 Oslo 3, Norway. (Tom Mastalka, Cleveland, OH)

PIRATE
RCCI Radio Comedy Club International, 7415 kHz. Full data cartoon sheet, without verification signer. Received in 13 days for an English report, mint stamp with a self-addressed envelope, and personal note. Station address: 300TR, 4th Avenue, Beaver Falls, Pennsylvania 15010 (postmarked from Illinois). (Harold Froedge, Midland, MI)

PORTUGUESE REPUBLIC
Radio Aparecida, 9450 kHz. Card verification signer, V.K. Received in 21 days for an English report. Station address: Avenida Getulio Vargas 185, CEP 12 570, Aparecida, Sao Paulo, Brazil. (Robert Landau, Secaucus, NJ) (John Carson, Norman, OK)

SCOTLAND
Weekend Music Radio, 15043 kHz. Full data form letter, with additional friendly letter, station info sheet, and stickers. Verification signer Jack Russell. Received in 40 days for an English report and two U.S. dollars. Station address: WMR, 154 Arran Close, Cambrige, England CB1 4HL. (Sam Wright, Biloxi, MS)

SHIP TRAFFIC
SEVILLA WAVE-CYPRUS FLAG-PJOD2, 500 kHz. (Bulk carrier.) Full data prepared card. Received for a utility report, and return postage. Ship address: Oseo Shipping Corp., 15 Sachauiont Street, 18536 Piraeus, Greece. (Hank Hobbrook, Dunkirk, MD)

SOUTH AFRICA
ZSC, Cape Town Radio-Time Signal, 17018 kHz. Full data QSL card with station stamp. Received in 94 days for an English utility report. Station address: c/o Chief Technician, Private Bag, Mimulet 7435, Cape Town, South Africa. (Nick Grace, Harvard, MA)

SWITZERLAND
Radio Cross Broadcasting Service, 17830 kHz. Full data QSL with station emblem, without verification signer. Received in 47 days for an English report. Station address: International Committee of the Red Cross, 19 Avenue de la Paix, CH-1202 Geneva, Switzerland. (Robert Landau, Secaucus, NJ)

UNITED STATES
WESH-TV Channel 2, Daytona Beach, Florida. Partial data personal letter and station info sheet. Verification signer, Nick Pleftras-Director. Received in 14 days for a mint stamp and a self-addressed envelope. Station address: 211 N. Ridgewood Avenue, Daytona Beach, Florida 32114. (Harold Froedge, Midland, MI)

ZAIRE
Radio Bakauu, 4839 kHz. Full data French personal letter. Verification signers were Kisonga Siti and Baruti Lusongela. Received in 89 days for an English report. Station address: Boite Postal 475, Bakuu, Zaïre. (Nick Grace, Harvard, MA)
VLF Comms

Since the 1960s, the Strategic Air Command (SAC) has used VLF frequencies to transmit RTTY messages to missile sites and other SAC installations in the U.S. The Navy currently uses RTTY and Morse code aboard the TACAMO (Take Charge and Move Out) aircraft.

One thing that is unusual with the Navy system is that instead of OOK (off on keying), they use FSK to send Morse code from the aircraft. By the way, they also use a one mile long "trailing wire" VLF antenna. FSK Morse code is used because current surges created by the OOK causes an overload on the aircraft's electrical system.

For many years hobbyists believed that an encrypted five-word-per-minute FSK Morse code was used by SAC on 48.5 kHz until a bright gentleman (a shortwave listener) found out that it was really five baud RTTY. The transmissions were coming from the SLFCS (Survivable Low Frequency Communications System) located in Silver Creek, Nebraska, which is a part of the Strategic Air Command's PACCs (Post Attack Command and Control System).

The location of the SLFCS isn't a mystery because they give it in the clear using 50 Hz shift at 50 baud on 48.5 kHz. The emissions designator that was listed in the ITU files for Silver Creek was .15 F9, but that information may be outdated. The Silver Creek transmitter used other frequencies in the past such as 34.5, followed by 29.5 in the seventies, but who knows where they'll move to next?

Maybe they'll blow up the site when it's no longer needed, like they did in Hawes, California. (The Hawes VLF sight transmitted on 37.2 and was also a part of PACCs.) Silver Creek was a part of the SAC "Bravo" HF net and used the code name "Foot Sore" for many years but the HF frequencies changed and calls were rotated so many times over the past several years that most SWL's lost track of the system.

In a recent book, The Nuclear Battle Fields, the Silver Creek site is described as being the "SAC Airborne Command Post GEP (UHF and HF Ground Entry Point) supporting SAC PACCS and a GWEN receive-only site."

They primarily transmit a new RTTY mode called MSK (Minimum Shift Keying) which SAC, for some reason, claims is compatible with the Navy's system. MSK uses a method that hides a third data bit which is extracted by the receive modem and reinserted in the bit stream. This system is used as a privacy mode but can be copied with the proper equipment. How the system works, even though it can be figured out by a knowledgeable engineer, is still regarded as "Top Secret" information.

The Silver Creek site changes the mode to standard RTTY several times during a 24 hour period. Then, they send a series of RYs (sometimes for several hours) followed by an EAM (Emergency Action Message). The same EAMs can also be heard on HF using USB voice and on the UHF wideband FM system from 225 to 400 MHz.

The transmit site is very easy to spot while traveling west on Route 30. As you approach the small town of Silver Creek, the 1300 foot tower is the tallest structure around. The site is located one mile north of Route 30 and one mile west of Route 39.

When the Monitoring Times photographer was sent out to photograph the facility, he couldn't get close enough to get a shot of HF antennas that are rumored to be at the site. He did notice a microwave dish that was pointing in the direction of Omaha.

The photo, looking west from Route 39, shows the massive antenna that literally penetrates the clouds. A dot was purposely placed near the top of the photo to show the actual height. Not shown, because of the poor clarity and because it was a cloudy day, are the guy wires that make up the antenna's "top hat."

A top hat resembles an umbrella and it's used to fine tune the tower to the VLF frequencies. It's also used to guy the top section of tower. Large insulators are used to electrically isolate the guy portion from the top hat. They were visible in the original photo but the resolution was lost in the printing process.

Well, here we are! Another year gone. The holidays are upon us and we can't forget to buy gifts for Aunt Martha and Uncle Fred. I'm sure they didn't forget you. Let's see. I think I know what they got you. They probably bought stocking stuffers like the Grove Power Antenna III or a 200 XL scanner. And because they spent so much money on you, you'll have to reciprocate. Maybe you can get Martha a new silverware set. Or how about a new set of golf clubs for Uncle Fred? Or you can get . . . Naaaaa.

1 The Nuclear Battle Fields; authors, Arkin & Fieldhouse; publisher, Ballinger (subsidiary of Harper and Rowe)
Notes to Santa Claus

Living in fear of getting another set of ugly socks and matching ties? Try dropping some hints to your friends and loved ones for any of the following gimcracks you’d like to see under the tree this Christmas.

1. **A universal remote control.** Combines the various hand held remote controls now cluttering your coffee table into one. Use it to combine your CD player, TV remote, VCR, satellite receiver, FM receiver, or even your SW receiver. Cost for the universal remote is about $90.00.

2. **Surround sound amplifier.** This neat little gadget decodes the separate audio channels in the audio of many movies for super realistic “theater-like” sound. You’ll need extra speakers to get the full effect. Cost for the surround sound amp is about $140.00.

3. **Remote control extender.** This unit allows you to control any infra red (IR) device from wherever in your house you may choose. You no longer have to lug your TV’s or VCR’s around the house. Simply place the extender over the TV set on which you want to watch and put the “sender” on the device you wish to control. Uses existing coax to send the IR commands. Cost for the extender is about $50.00.

4. **IR to UHF converter.** Converts any existing IR remote control unit to UHF frequencies. Allows you to control your TV, VCR, or Satellite receiver anywhere inside or outside the house without any cables. Cost for the converter is about $80.00.

5. **Two essential books.** Not exactly the books you’ll curl up with in front of the fireplace but two you’ll greatly appreciate: The Home Satellite TV Installation and Troubleshooting Manual (about $30.00) and the 1990 World Satellite Almanac (about $35.00).

All of the above are available from one or more of the following:

- **DBS Satellite TV**
  - 800-327-0048 (National)
  - 800-327-2345 (California)

- **NBO Distributors**
  - 800-346-6466 (National)

- **The Sky Store**
  - 800-328-7733 (National)
  - 800-542-5011 (Minnesota)

- **Skyvision**
  - 800-543-3025 (National)

- **West, Inc.**
  - 800-222-9064 (National)
  - 800-952-5520 (Washington)

**More Mail Order TVRO**

Two satellite TV mail order companies have recently come to my attention. The first is DBS Satellite Television of Ventura, California, which offers a ten page catalog featuring big-name top-grade merchandise. DBS offers complete packages or individual components—whichever one might need. In addition, there is a useful receiver comparison chart which compares the features of 22 receiver models.

Call for the catalog at the above phone number or write them at 2316 Channel Drive, Ventura, CA 93003-4525.

The other is Skyvision, Inc. of Fergus Falls, Minnesota, which offers a 29 page catalog of complete systems and components as well as other video and audio accessories. Skyvision, too, offers top name gear and gives away the “Skyvision Do-It-Yourself Installation Video” free with the purchase of a new system. Dozens of extras such as splitters, switches, line amps, tools, cable, peaking meters, and roof mount accessories are also offered. Call them at the above number or write Skyvision, Inc., 2066 College Way, Fergus Falls, MN 56537.

**Mailbag**

"Is it possible, with a reasonable size dish, to receive signals from the NPR (National Public Radio) satellite?"—Wayne Haggarty, Thornton, CO

Strange as it may seem, Wayne, the answer is yes! It happens that the center of the footprint for W4 (where the signal is strongest, and where NPR resides) covers all but the western edge and northern fringe of the U.S. This means that fairly good signals should be had with a small very accurate reflecting surface. A one piece four foot fiberglass dish should do nicely.

You might be interested to know that Bob Heil offers an audio-only satellite system featuring a five foot ring mount dish (which you should be able to set on the floor of your apartment), a feedhorn with polarotor, a power supply for the LNB and 100 feet of wire with appropriate connectors all for $450 plus shipping.

What this means is that if you already own an Icom 7000 (which covers the 960-1450 MHz frequencies we’re interested in) you may simply hook up the Icom and start tuning SCPC. If you don’t have the Icom, use the Heil SC-1 (about $450).

Now, in your particular situation, you may have difficulty switching your antenna between W4 (home of NPR) and G2 (site of all the baseball and other sports backhauls). Still, it is possible. Write Bob Heil for information at Heil Sound Ltd., Marilla, IL 62257, or call 618-295-3000.

**Transponder Notes**

**NASA Info**

Late breaking news from NASA including shuttle launch schedules and other space related activities are available via telephone on the NASA Headline News Service. The service, available Monday through Friday, is a toll call at 202-755-1788. Broadcast schedules for NASA Select, the video feed for the world’s press on

**Monitoring Times**

December 1989

Ken Reitz, KC4GQA

P.O. Box 98

Brasstown, NC 28902

Spacenet 2 Transponder 21 is the location for the U.S. Information Agency (see billboard). Here programming from American TV networks and C-SPAN are rebroadcast for reception by Americans in Europe. In addition, Voice of America audio and video broadcasts can be found here as well. World Net programming is also seen on this channel.

F2-13 is detailed on the headline service as well. My thanks to Todd Shideler of Jean, Nevada, for passing on a copy of a letter from the office of Public Affairs at NASA. The letter, in part, reads:

"...NASA is not in the broadcast business; however, we have no objection to you receiving our transmissions from Satcom F2R, transponder 13, which are used to move video and audio from one center to another. NASA Select comprises mission press conferences, flight director change-of-shift briefings, and other briefings as appropriate. At all other times, it carries air-to-ground and PAO mission commentary with video of Mission Control personnel. We also utilize transponder 9 on Satcom F2R to distribute audio only and it carries uninterrupted air-to-ground and PAO commentary. The satellite's receiver should be tuned to 6113.3 MHz for proper reception of this channel..."

Don't look for this frequency on your satellite receiver. It's SCPC/FM and must be tuned with an SCPC receiver. Set your satellite receiver to channel 9. Split the 70 MHz loop on the back of your receiver. Feed the coax from the loop to the amplifier of a TV-audio radio. Tune through channels 1-6 and it will be right there.

This season NFL fans have been enjoying the network backhaul feeds from CBS on the Telstar satellites including the little used but still powerful T303. ABC's Monday Night backhaul remains T301. NBC's activity is mostly on Ku band but a surprising number of backhauls have been found on F2. Look to these same channels for the upcoming play-offs.
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AMT89

MONITORING TIMES
"Live! From the McAlpin Hotel in New York City, you’re listening to WMCA!" In the thirties, big band music was the sound of 570 radio, broadcast from studios filled with ball gowns and tuxedos. By 1960, rock ‘n’ roll had taken over. The station became "Good Guy Radio," with the WMCA Good Guys: Jack Spector, Harry Harrison, Gary Stevens, and B. Mitchell Reed. Thousands of teenagers wore bright orange Good Guy sweatshirts with a happy face smiling at you on the front.

The music eventually faded and the Good Guys were replaced by talkshow hosts. Barry Gray, Barry Farber, and Sonny Bloch became WMCA institutions during the eighties. Their controversial topics and heartfelt advice was the talk of the town.

1989 has brought the station another rite of passage -- and a dream come true for Stuart Epperson. Epperson’s company, Salem Communications, recently purchased WMCA for 15 million dollars. Many years ago, Epperson operated a country and western station. Listening to the music he was broadcasting, he found himself offended by the language and double entendre. Epperson decided to stop broadcasting "down home music" and replace it with Christian programming.

Since then, Salem has had amazing success with the idea and now owns 14 stations from coast to coast. Their newest acquisition, WMCA, has become the first major station in New York City to air an inspirational Christian format. With a potential audience of 19 million people, WMCA penetrates the large population centers of New York, New Jersey, Connecticut, and Rhode Island with its 5,000 watt signal.

Salem Communications has a proven formula for commercial Christian radio stations. General Manager, Joe D. Davis explains: "The purpose of WMCA is to establish and preserve inspirational broadcasting. We provide good Bible teaching and inspirational music that is interesting, convenient, and easily accessible."

Although WMCA is on the air 24 hours a day, only a handful of the programs are produced in their studios. Some popular WMCA shows were continued. Sonny Bloch’s real estate talk show is still heard and is syndicated to almost 200 stations nationwide. "Our format does not conflict with real estate," says Davis. "Christian listeners need this information, and it’s a very successful show."

Too, WMCA’s coverage of Rutgers University football and the Football Game of the Week also continue to be heard. Other survivors include Sonny Bloch’s "Today’s Business Journal," Gary Null’s "Natural Living," "Ask the Doctor," and "The Auto Show," with questions and answers about car repair.

Programming a Christian radio station is actually quite a challenge. WMCA sells most of its broadcast day in 30 or 60 minute blocks, along with short spot advertisements. When your shows are produced by many different syndicators, maintaining a consistent sound is not easy. The content of one show must never alienate or offend the audience of another.

WMCA relies on a nationwide clearing house of Christian programming to establish criteria for a homogenous sound all day long. National Religious Broadcasters, based in New Jersey, continually monitors WMCA’s Christian programmers. Everything that is heard on the station must meet these standards of content and philosophy.

Even the commercials intends a holy message. You’ll hear ads for Christian health foods and a computer database program of seven different versions of the Bible to aid sermon writing and Bible study. One often-heard public service announcement offers suggestions to children whose parents do not understand the merits of Christian rock ‘n’ roll.

"Successful" is the best word to describe WMCA’s new Christian sound. The station is sold out on weekdays, and weekend schedules are filling in rapidly. WMCA also receives payments from four radio networks. The Mutual Radio Network, Satellite Music Network, Unistar, and National Black Networks all sell a "spot" announcements to clients who want nationwide coverage. WMCA is the New York City affiliate for all four networks and airs the commercials they feed to the station hourly. WMCA’s management has cleverly juggled their broadcast schedule and maximized the profitability of the station.

Davis, however, is not satisfied with these early achievements. A Christian personality talk show is being developed which will air from 3 to 5 p.m. weekdays. "All we need now is the right person to be the host. We’ll discuss today’s issues with a Christian point of view."

Davis describes the station’s long-term goals: "We want big numbers (ratings) with a select group of people -- Christian listeners in the metropolitan area. Being an AM station is not a handicap. People listening for something special will tune in. We hope to be the premier Christian station not only in New York, but of the entire country."

Davis also plans to apply to the FCC for a significant increase of power and coverage of WMCA’s signal. If the first few months are any indication of the future, WMCA is destined to continue its legacy of trend-setting broadcasting that started back in 1922.

Bits and Pieces

In "American Bandscan" last month you read all about Los Angeles jazz station KGGO. The jazz has now been blended with classical music. KFAC, a classical station, was sold for 55 million dollars and has changed its format to rock. They donated their enormous classical
music library to KUSC, owned by the University of Southern California. KFAC will donate its call letters to one of KUSC's repeater stations and give KUSC a large cash donation to continue classical music broadcasting in the City of Angels. KKG has added several hours of classical music to its daily jazz schedule to absorb part of KFAC's audience.

Other classical radio stations are altering their sound to attract a younger audience. WNCN in New York City has hired pop music disk jockeys to create a new contemporary sound. Opera, organ, and avant-garde music has been banished from their format. Classical stations in San Francisco, Salt Lake City, Houston, and Milwaukee have changed their formats recently. Roll over, Beethoven, and tell Tchaikovsky the news!

AM radio now serves only 26 percent of all listeners in the United States, and station owners are banding together to create a new public image of the band. Here are some of their current strategies: The National Association of Broadcasters has started a "Super AM" campaign. They will work with receiver manufacturers to market new high-fidelity all-band radios that continuously tune AM and FM as if they were one band. These new radios will carry a distinctive eye-catching "Super AM" logo sticker.

New antennas are being developed to maximize ground wave and to eliminate troublesome "skip" into distant areas. Several groups are pressuring the FCC to adopt strict rules limiting electronic interference from devices like computers and light dimmers. AM stereo car radios are becoming available again. Radio Shack and J.C. Whitney, the auto parts mail order house, are offering models for Christmas.

Many plans have been proposed to the FCC to allow AM stations to broadcast FM in new or existing bands. AM radio is determined to remain competitive and create a new renaissance of prosperity and listenership. Speaking of AM, "The Big 89," WLS, in Chicago has finally pulled the plug on rock 'n' roll and switched to talk. The home of Dick Biondi and Larry Lujack is now another rock radio legend.

Mailbag

Michael Feldman's "What's New?" comedy quiz show, heard on WHA, 970 AM, in Madison, Wisconsin, is being taped as a pilot for a possible TV series by the Disney Channel. The show is heard on 88 stations nationwide on American Public Radio. Feldman is a former cab driver and taught English at Madison's Shabazz City High School. Also in Madison, WHIT-AM has switched to country music, and new WMJ, FM 106, in nearby Janesville, has signed on with an adult contemporary format, satellite delivered by Drake-Chenault in Albuquerque, New Mexico. Our thanks to Thomas Miller for this news.

Selden Richardson, of Richmond, Virginia, tells us that WLEE, on its new frequency of 1320 AM, has left the air. The station was locked up after only three months on the air. The station is heavily in debt with unpaid rent and many disgruntled employees.

New Station Grants

Look for new stations on these frequencies:
- Trinity, Alabama 92.5
- Manhattan, Kansas 104.7
- Monticello, Kentucky 91.3
- Howland, Maine 103.9
- Oscoda, Michigan 95.7
- Jackson, New Hampshire 99.5
- State College, Pennsylvania 94.5
- Greenville, South Carolina 91.7
- Chase City, Virginia 99.9
- Harrisonburg, Washington 88.7
- Beverly Hills, Florida 97.1
- Millerstown, Kentucky 90.1
- Shepardsville, Kentucky 104.9
- DeWitt, Michigan 96.5
- Warren, North Carolina 99.9
- Lujas, Puerto Rico 103.7
- Midland, Texas 90.1
- Claremont, Virginia 670

courtesy of the M Street Journal

For Sale

A construction permit for a large AM station in the west, located in a major market area, is for sale. It boasts a great nighttime coverage pattern. Contact: C. Hall at KRDA, 2207 South Nevada, Provo, Utah 84606, or call 801-374-6809.

Veteran broadcaster George Dacre says that 75 percent of a hot AM daytimer is for sale to the right person who can serve as Sales Manager and Operate, the station. Call George at 914-651-9446 or write him at WTBQ, 62 Main Street, Florida, New York 10921.

$20,000 will bring you a one kilowatt AM station on 1580 kHz. Located one hour south of Nashville, it has only one other station to compete with. Drop a line to A. Wilkerson at WLL, P.O. Box 340, Lenoir City, Tennessee 37771, or call 615-986-7536.

A Class A FM and a 10 kilowatt AM daytimer are for sale as a package deal. It is priced for quick sale. Call J. Darr in Price, Utah, at 801-637-0863 or 1752 for all the details.

International Bandscan

"EM" is the name of a new station that is catering to the youth of Czechoslovakia. You can find it on FM and on 1071 kHz AM daily, in and around Prague.

All India Radio has added a transmitter on 1251 kHz to serve Delhi with its national service programs. A one million watt transmitter has gone on the air in Nagpur on 1566 kHz broadcasting AIR extended service programs.

Atlantic 252, from Ireland, is broadcasting on longwave on 252 kHz with 500 kilowatts and Optimod-AM processing. It is on the air from 0500 to 1800 UTC daily. Send your QSL requests and letters to P.O. Box 252, London, W1E 2RA, England. Their rock music format is being heard widely throughout Ireland, Great Britain, Europe, and North America.

Radio Monte Carlo in Monaco now has Arabic programming during the day until 1830 UTC on 1467 kHz. The French service is now carried only on longwave at 216 kHz, and on local FM transmitters. The longwave transmitter signs off at 0005 UTC.

Credits:

First, we would like to wish all our readers a very Merry Christmas and a Happy New Year! Make your New Year's resolutions include reporting to American Bandscan! We'd love to hear from you.

This month we would like to thank Joe Davis and Sonny Bloch at WMCA, Marianne Bellinger at SNN, readers Joseph Johnson, Selden Richardson, Thomas Miller, Ruth Hesch, W.E. Doan, Brian Robinson, Jack Montgomery, Mark Pierce, Carleton Burt, and Robert Gortner. Some of our information comes from The M Street Journal, Broadcasting and Radio World magazines, and the FM Media/ newsletter. Until next year, have a wonderful holiday season!
Reflections on 1989

I lost some good friends in 1989, and I expect you did too. As this is written, Caroline is silent. She was not just another station or even just a pirate with a long life. She can claim to have changed the direction of European radio, and, through her shaping of the British music industry, she had a tremendous impact on American culture as well. It is extremely difficult to find and long out of print, but if you can locate a copy of When Pirates Ruled the Waves by Paul Harris, you will discover what Caroline was all about. I hope I am wrong, but I do not think she will be back.

We lost the Irish pirates, and John "The Man" Frawley of Ireland's Radio Luimni passed away. We lost more than a host on an Irish pirate program when John died. We lost a legend. He cannot be replaced, and somehow the world is a little less kind because of it. Those of you fortunate enough to have heard him live or by tape will know what I mean.

At least for now, we have lost La Voz de Alpha 66 as the result of the FCC's action. It matters not whether you agree with Dr. Diego Medina's anti-Castro politics or not. To hear him was to know that this was a person of unusual sincerity and great dedication.

So, 1989 was a year of loss. And those we lost were some of the concrete evidence that unlicensed broadcasting is far more than just "kids playing radio." Here's hoping that 1990 is a "kinder and more gentle" year.

Ireland: From the Netherlands, Ary Boender reports a few Irish pirates manage to hang on, but no one knows for how long. Still operating in Monaghan are Radio Star Country and FM 100. In County Donegal, WABC, Radio North, and Riverside Radio are broadcasting. Radio Dublin has now stopped both its shortwave and midiumwave transmissions. At present, FM broadcasts are continuing.

Radio Caroline: More details have been coming in on the Caroline closing. If nothing else, Caroline seems to have encouraged almost as much European cooperation as the ECC. The Dutch took the lead but with the backing of the British, French, Belgians, Spaniards, and possibly the West Germans.

Although the Dutch deny it, the claim continues that engineer Peter Chicago was hit with the butt of a revolver. Disc jockey Rob Harrison was wounded so badly that a doctor had to be rushed to the Ross Revenge, Caroline's ship. Two women on board were allegedly sexually harassed. Most of the equipment on the ship was said to have been smashed with sledgehammers.

Why was such drastic action taken? It appears the Dutch did not like Caroline's radio 819, a Dutch language service, or World Mission Radio, which is run by a Dutch evangelist. Apparently all the countries involved thought it was time to discourage new offshore stations. Some also feel Caroline's shortwave service on 6215 was causing interference to marine communications.

So far, American media have been almost totally silent about the Caroline raid. It was conducted and supported by some of the most advanced and civilized countries in the world. I cannot help wonder what the reaction would have been if this had been the work of the Iranians or Chinese. Is there, perhaps, a double standard at work here? My thanks to Ary Boender, Jack Russel of Scotland's Weekend Music Radio, Pat Murphy, Gregg Allinson, and Bill Tomkiew for their help on the Caroline story. The editorial comments are strictly those of this writer.

Want more information on Caroline? Ary says you can try (at your expense) the "Caroline infoline." The number in England is 836-404315.

Computers: We would like to hear from "Outer Limits" readers who have used computer boards and information services as a source of shortwave information. Let us know what ones you have used, what material was obtained, how useful it was, and what costs were involved. We will share the results of this survey in a future column.

Have Your Numbers and Clandestine too: This writer heard an unusual transmission on El Salvador clandestine Radio Venceremos. At 0052 (sign-off was 0102) the station announced it was broadcasting a "special dispatch." This consisted of six-digit Spanish numbers groups. I have been told of

Left: the KPF-941 transmitter. Below, the "shy" participants in the RNI Free Radio Convention.
six-digit numbers broadcasts, but this is the first one I ever heard. Unlike many Venceremos transmissions, there was no change of frequency during this one. The frequency of 6400 was used throughout the entire broadcast. And while on the subject of El Salvador, let me highly recommend Joan Didion’s book *Salvador*. It will make the terror of the place very real to the reader.

While discussing numbers stations, Philis Werlin brought to our attention the fact they are now getting some attention outside shortwave circles. She sent along an excellent article on the subject by Cecil Adams in the *Boston Phoenix*, an "alternative" arts and entertainment weekly.

*Hurricane Hugo* brought much tragedy, and shortwave listeners in particular were made aware of how devastating the storm was. In Connecticut Bob Thomas monitored the national Hurricane Watch Network, which coordinates with the National Hurricane Center in Coral Gables, Florida on 14325 USB. This writer heard the South Carolina Emergency Hurricane watch net on 3915 kHz. Help and welfare traffic to and from Puerto Rico, the Virgin Islands, and other Caribbean islands could be heard on 14275, 14283, and other frequencies. Bob says Cuban hams may also be on 14325.

"The Captain of Pirate Station Y-12" tells us a most interesting convention was held recently. Hosted by Radio New York International, its honored guests are all involved in New York City area pirate broadcasting. They met at the transmitter site of the forerunner of RNI, the famous KPF-941 (1622 kHz). KPF-941 claimed it was a licensed station, which it was. However, the FCC declared it was engaged in pirate activity, since it was functioning as a community station for Yonkers, New York, rather than as an auxiliary station. The FCC shut it down.

The convention featured an examination of the KPF-941 transmitter, a discussion of the closings of area pirate WHTO and Radio Caroline, a viewing of RNI videos, and other pursuits including the consumption of large quantities of pizza. Apparently a great time was had by all.

We could not resist showing *Monitoring Times* readers the photos of the transmitter and of those in attendance sent by the Captain. Thanks very much, Captain!

**Here and There:** Patrick Hennessey, from the state of Washington, logged west coast pirate Zodiac Radio on 7415 at 0330. In Ontario, Michael Cook heard political and religious pirate Free Radio One on 7415 at 1915. He says the station also uses 4005. Virginia’s Steve Rogovich, North Carolina’s Gregg Alinson, New Hampshire’s Ray Labrie, and this writer are all proud possessors of QSLs from Scottish pirate Weekend Music Radio. Let us hope WMR does not meet a fate similar to that of Caroline.

- In Pennsylvania Barry Rowan got QSL No. 11 from Radio Free Massachusetts for a logging on 7415. In a future column we will try to include a copy of this one.
- Meanwhile, back in Massachusetts, Nick Grace continues to hear nearly every pirate around. Among his recent catches are KNBS on 7412 (2001 UTC), Radio Jam (or Jan?) on 7415, WBRI on 7491 (0332), Radio USA on 7417 (2211), Radio Flatulence on 7417 (2227), and United World Radio on 7415 (0255).
- Mike Fern is catching some clandestine activity out in California. On 6315 between 1000 and 1100 UTC he has heard the Nicaraguan Contra station with both Radio Liberacion and Radio Quince de Septiembre identifications. He has logged anti-Castro La Voz del CID on both 6305 and 9940. If you have never tried to monitor a clandestine, give this one a chance. It usually puts in a solid signal.
- From WZXR Monteological Research Radio comes the claim they will have worldwide coverage through a series of relays. They promise to send copies of reception reports to prove it. Bruce Doolittle got a QSL from WKZP for a 7415 transmission monitored in Ohio. Minnesota’s Alan Masuga received a Free Radio One QSL certificate. This writer says thanks for a recent QSL received for a 7415 broadcast by United World Radio and relayed by the Voice of Free Long Island.
- Pennsylvania’s John Demmert reports strange things are being heard on the aero band, including fake messages, excerpts of KDKA Pittsburgh, and comments on the union strike against the airlines. It appears the Greater Airport at Pittsburgh is the target, and all we can say is that this type of piracy could get somebody accidentally killed.

**Radio Clandestine Update:** It appears that some of the widely-heard Radio Clandestine broadcasts are live and do include new material. At least some of the broadcasts do feature the original R.F. Burns, but those monitored here also included people apparently not with the original Clandestine crew. As we previously reported, when Clandestine first returned after over a year of silence, the broadcasts seemed to be replays of old Radio Clandestine classics. Regardless of what is being aired, or who is doing it, one thing is certain. The Radio Clandestine name has been entertaining people for a long time!

In addition to this writer, recent Radio Clandestine monitors have included Nick Grace (7415 kHz), Pennsylvania’s Bob Montgomery (7414.5 at 0300), and Barry Rowan (7415 at 0206). Barry also heard Radio Garbanzo, and KRUD on the same frequency that evening.

If Radio Clandestine has been easy to hear lately, it may be more difficult to QSL. Our reception report sent to the Pirate Radio Network box in Kingston, New York, used by Clandestine and several other stations, was returned by the post office with the notation that the box had been closed.

**Croatian Independence?** Finally we leave you with an unusual and easily heard clandestine. It is Radio Libertas, which is relayed at approximately 1630 UTC via WHRI on 11790 and 21840 kHz. This Croatian language program is produced by the Croatian Committee for Human Rights in Canada. The Committee is affiliated with the Croatian National Congress which seeks an independent Croatia separate from Yugoslavia. According to the Clandestine Confidential newsletter, the address is 1174 Clarkson Road North, Mississauga, Ontario L5J 2W2, Canada.

**MONITORING TIMES**

December 1989

53

www.americanradiohistory.com
What’s New in Beacons

A couple of months ago, a DXer in Quebec reported hearing his first beacon from Texas. It was CBC on 413 kHz. This beacon is located in Anahuac, Texas, and the power is listed at 25 watts. He was quite proud of his achievement and he should be.

A few weeks later, CBC was reported in Delaware. The DXer here reported that she heard it simultaneously with BC/414, so she was certain that it was not BC with an erratic signal of some kind. This was a new record for her in reaching. (Low frequency beacons are heard greater distances along north/south lines than in east/west directions.) Later, she reported that CBC was heard almost on a daily basis at her location in Dover.

All of this was a little disturbing, because it wasn’t being reported from the middle west. If a 25 watt beacon in Texas could stretch to the Atlantic Ocean and even up into eastern Canada, it would likely be heard in an area almost directly north of the location. But it wasn’t being reported from the middle west. In fact, the beacon seemed more likely to be in the east than in Texas, based on where it was heard being.

The United States does not assign a three-letter ID to more than one beacon. There had been no indication that the beacon at Anahuac had been shut down and the ID reassigned elsewhere. And it would be impossible that they would reassign the ID on the same frequency for a different location. Thus, if it were eastern, it would have to be outside of the United States.

Finally, CBC was heard in the middle west. By several people, including myself. It seemed to be on 415 rather than 413 and to be more southeastern than Texas. In fact, when my loop was turned toward Texas, HJM/415 from Bonham, Texas, buried the signal of CBC. The general belief now is that this is a new beacon in the Caribbean area. One possibility is Cuba.

Part of the fascination of DXing low frequency beacons is that you never know when something new will turn up. Existing beacons change their IDs and/or their frequencies; new beacons appear and old beacons are closed down. The very next beacon you may be something completely new.

What’s That I Hear...

Donald MacLaughlin writes from Guam that he heard a transmission on 384 kHz that just repeated itself (in code) AJA, AJA, etc. He wondered what it was.

What you heard, Donald, was an NDB, or nondirectional beacon. The term nondirectional applies to the transmitter in that the signal is transmitted in all directions rather than beamed in one or two specified directions.

However, at the receiver end, low frequency signals are very directional. Using a loop antenna can enable you to get a bearing of where the transmitter is located relative to your location. For that reason, these beacons are used for navigational purposes.

The beacon you heard is right there on Guam, operated by the Navy at Agana NAS/Brewer Field. The transmitter frequency is 385 kHz and the beacon is a double sideband type. If you were using the CW setting on your receiver, you were hearing the lower sideband. The upper sideband would be at 386.

If you use the sideband settings, you tune to the carrier frequency (385 for AJA) and pick up the audio from the sideband. Almost all U.S. beacons and many in other countries have sidebands 1020 Hertz from the carrier. Some Canadian beacons use 1020 and some use 400 Hertz for the sideband.

Or I Didn’t Hear

John Barbato of New Jersey asks why he doesn’t hear any weather broadcasts from nearby beacons on 375 and 379 kHz. EWR/379 in Newark used to have continuous weather broadcasts. The ID was later changed to GKQ. The voice broadcasts were discontinued several years ago and GKQ remains today without voice.

ELM/375 kHz in Elmira continued with the voice weather broadcasts somewhat longer. They were heard over a considerable area, even well out into the middle west. About a year ago, the voice weather broadcasts were no longer heard. It may be several years before the beacon is officially listed without voice capability, but it is most likely that the voice transmissions are now history.

Only a few beacons remain with voice transmissions on a continuous basis. Probably the best known, and most widely heard, are TUK/194 Nantucket, Massachusetts; GLS/206 Galveston, Texas; and GNI/236 Grand Isle, Louisiana.

I’m Glad You Asked

Donald MacLaughlin also asked about a book to tell him what the low frequency beacon band is all about. His timing is perfect. The new edition of The Aero/Marine Beacon Guide is just off the press.

This guide contains a listing of over 6000 beacons in the western hemisphere, the Pacific areas, and Asia. This includes all of the low frequency beacons in these areas plus those beacons still remaining in the 1600-1800 kHz range.

Divided between North American and foreign, and arranged in frequency order, each listing shows the frequency, ID, modulation shift, location by name and coordinates, elevation of transmitter site, power, and miscellaneous additional information (where pertinent). There is a cross index by ID to make locating that "new catch" much easier. There are also articles by well-known DXers on propagation, listening techniques, and sending for QSLs.

The Guide is edited by Ken Stryker, Unidentified Beacons Editor of the Longwave Club of America, and compiled by myself. To order the Guide, send $15.00 to: Ken Stryker, 2856-G W. Touhy Avenue, Chicago, IL 60645.
EEB and GRUNDIG Present This Fabulous Sale to Celebrate the 25th Anniversary of the World Famous Satellite Shortwave Receiver.

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Sunday
Dec 3rd,10th,17th,24th,31st

0000 Deutsche Welle: Mailbag/To the Top/Checkpoint. See S 0117.
0030 BBC: The Ken Bruce Show. A mix of popular music and entertainment news.
0109 Deutsche Welle: Mailbag/To the Top/Checkpoint. See S 0117.
0130 BBC: Quiz. A quiz show of a topical nature.
0139 Deutsche Welle: German by Radio. A language course for English speakers.
0145 BBC: Personal View. A personal opinion on topical issues in British life.
0309 Deutsche Welle: German by Radio. See S 0130.
0315 BBC: From Our Own Correspondent. An in-depth news story from correspondents worldwide.
0317 Deutsche Welle: Mailbag/To the Top/Checkpoint. See S 0117.
0330 BBC: Quiz. A quiz show of a topical nature.
0339 Deutsche Welle: German by Radio. See S 0139.
0350 BBC: Jazz Selections. Jazz music.
0359 Deutsche Welle: Mailbag/To the Top/Checkpoint. See S 0117.
0445 BBC: Personal View. A personal opinion on topical issues in British life.
0459 Deutsche Welle: Mailbag/To the Top/Checkpoint. See S 0117.
0517 Deutsche Welle: Mailbag/To the Top/Checkpoint. See S 0117.
0539 Deutsche Welle: German by Radio. See S 0139.
0540 BBC: Words of Faith. People share how their scripture gives meaning to their lives.
0609 Deutsche Welle: Religion and Society. See S 0009.
0619 Deutsche Welle: African In the German Press.
0710 Deutsche Welle: Mailbag/To the Top/Checkpoint. See S 0117.
0730 BBC: From Our Own Correspondent. See S 0015.
0735 Radio Canada Int'l: Coast to Coast. Aldo Marchini looks at opinions of Canadians on issues affecting them.
0745 BBC: Book Choice. Short reviews of current or future best-sellers.
0750 BBC: Waveguide. How to hear the BBC better.
0809 Deutsche Welle: Arts on the Air. Reports and interviews on major cultural events and developments.
0815 BBC: From Our Own Correspondent. See S 0015.
0830 Deutsche Welle: Composer of the Month. See S 0007.
0839 Deutsche Welle: Reports from the Soul Scene. Robbie Vincent presents classic soul tracks and current music from the soul scene.
0915 Deutsche Welle: Music Selections. Jazz music.
0939 Deutsche Welle: German by Radio. See S 0139.
0945 BBC: Personal View. A personal opinion on topical issues in British life.
1006 Deutsche Welle: Mailbag/To the Top/Checkpoint. See S 0117.
1030 Deutsche Welle: From Our Own Correspondent. An in-depth news story from correspondents worldwide.
1033 Deutsche Welle: Religion and Society. See S 0009.
1045 BBC: Personal View. A personal opinion on topical issues in British life.
1109 Deutsche Welle: Arts on the Air. Reports and interviews on major cultural events and developments.
1115 BBC: From Our Own Correspondent. See S 0015.
1145 Deutsche Welle: Arts on the Air. Reports and interviews on major cultural events and developments.
1158 Deutsche Welle: Composer of the Month. See S 0007.
1210 Deutsche Welle: Mailbag/To the Top/Checkpoint. See S 0117.
1230 Deutsche Welle: From Our Own Correspondent. An in-depth news story from correspondents worldwide.
1300 Deutsche Welle: Music Selections. Jazz music.
1430 Deutsche Welle: Mailbag/To the Top/Checkpoint. See S 0117.
1500 Deutsche Welle: From Our Own Correspondent. An in-depth news story from correspondents worldwide.
1600 Deutsche Welle: Music Selections. Jazz music.
1900 Deutsche Welle: Mailbag/To the Top/Checkpoint. See S 0117.

Legend
* The first four digits of an entry are the program start time in UTC.
* The time is followed by the station name, program name, and a brief summary of the program's content.
* Some listings may be followed by "See X 0000." The letter stands for a day of the week:

S=Sunday  M=Monday  T=Tuesday  W=Wednesday  H=Thursday  F=Friday  A=Saturday

The four digits stand for a time in UTC. Listeners should check back to that date and time to find out more about that particular program.

* All broadcasts are listed in chronological order, starting on Sunday at 0000 UTC and ending on Saturday at 2359 UTC.
* All days are in UTC. Remember that if you are listening in North America prime time, it is actually the next morning UTC. For example, if you are listening to a program at 7:01 pm [EST] on your Thursday night, that's equal to 0001 UTC and therefore Friday morning UTC.

We suggest that you tune in to a program a few minutes before the schedule start time, as some stations have tentative schedules which may slightly vary. We invite listeners and stations to send program information to the program manager at the address above.
### NEWS GUIDE

This is your guide to news broadcasts on the air. All broadcasts are daily unless otherwise noted by brackets. These brackets enclose day codes denoting days of broadcast. The codes are as follows:

- **S** = Sunday
- **M** = Monday
- **T** = Tuesday
- **W** = Wednesday
- **H** = Thursday
- **F** = Friday
- **A** = Saturday

We invite listeners and stations to send program information to the program manager.

<table>
<thead>
<tr>
<th>Code</th>
<th>Station</th>
<th>Frequency</th>
<th>Language</th>
<th>Description</th>
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<td>1201</td>
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<td>News</td>
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<td>Kol Israel</td>
<td>1202</td>
<td>Hebrew</td>
<td>News</td>
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<td>KVSH</td>
<td>1203</td>
<td>English</td>
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<td>Radio Australia</td>
<td>1204</td>
<td>English</td>
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<td>Radio Berlin News</td>
<td>1205</td>
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<td>Spanish</td>
<td>News [M-A]</td>
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<td>Radio New Zealand</td>
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<td>0000</td>
<td>Spanish National Radio</td>
<td>1209</td>
<td>Spanish</td>
<td>News</td>
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<td>Voice of America</td>
<td>1210</td>
<td>English</td>
<td>News</td>
</tr>
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<td>0000</td>
<td>WWCR</td>
<td>1211</td>
<td>English</td>
<td>News [M-F]</td>
</tr>
<tr>
<td>0010</td>
<td>Radio Beijing News About China</td>
<td>1212</td>
<td>Chinese</td>
<td>News</td>
</tr>
<tr>
<td>0030</td>
<td>Christian Science Monitor News</td>
<td>1213</td>
<td>English</td>
<td>[T-F]</td>
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<td>KVOH</td>
<td>1214</td>
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<td>1215</td>
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<td>1218</td>
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<td>1220</td>
<td>Dutch</td>
<td>News [T-S]</td>
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<td>0030</td>
<td>Voice of America (Americas, East Asia)</td>
<td>1221</td>
<td>English</td>
<td>News</td>
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</tbody>
</table>

**MONITORING TIMES**

December 1989
Polly and Ken MacHarg; MacHarg's "Saludos Amigos" will be replacing "DX Party Line" on Sundays.

0406 Christian Science Monitor (East Africa): News Focus. See M 0206.
0409 Deutsche Welle: Morning Magazine. See M 0209.
0430 BBC: Off the Shelf. A reading selected from the best of world literature.
0434 Deutsche Welle: Africa Report. Reports and background to the news from correspondents.
0445 BBC: Nature Now. Information about flora, fauna, and natural resources.
0506 Christian Science Monitor (East Africa): One Norway Street. See M 0306.
0509 BBC: Twenty-Four Hours. See S 0509.
0509 Deutsche Welle: Commentary. See S 0109.
0512 Deutsche Welle: Letter from Berlin/Bonn. See M 0112.
0516 Deutsche Welle: Religion and Society. See S 0409.
0526 Deutsche Welle: International Talking Point. See S 1513.

Tuesday

Dec 5th, 12th, 19th, 26th

0006 Christian Science Monitor: News Focus. See M 0206.

news guide con't from p.57

0130 Christian Science Monitor: News [T-F]
0130 KVOH: UP! Headline News [T-A]
0130 Radio Budapest: News
0130 Radio Havana Cuba: News [M-A]
0130 Radio Moscow (World Service): News in Brief
0150 HCJB: News [T-A]
0151 Radio Veritas Asia: World News [M-F]
0151 Spanish National Radio: News Summary [S]
0153 Radio Prague: News Wrap-Up
0155 HCJB: News [S]
0155 Radio Veritas Asia: World News [A]
0155 Voice of Indonesia: News in Brief
0200 BBC: World News
0200 Christian Science Monitor: News
0200 Deutsche Welle: World News
0200 KBOH: News
0200 Kol Israel: News
0200 KVOH: UP! Radio News [T-A]
0200 Radio Australia: International Report
0200 Radio Berlin Int'l: News
0200 Radio Bras, Brasilia: News
0200 Radio Havana Cuba: Int'l News [M-A]
0200 Radio Moscow Int'l: News [M-A]
0200 Voice of America: News
0200 Voice of China: News and Commentary
0200 Voice of Free China: News
0216 Radio Cairo: News
0219 Radio Canada Int'l: News [T-A]
0230 Christian Science Monitor: News [T-F]
0230 KVOH: UP! Headline News [T-A]
0230 Radio Finland: North Report [T-A]
0230 Radio Havana Cuba: Newsbreak
0230 Radio Moscow (World Service): News in Brief [S-M]
0230 Radio Pakistan: News (Special English)
0230 Radio Portugal: News [T-A]
0230 Radio Tahiti, Tahiti: News
0245 Radio Berlin Int'l: News
0300 BBC: World News
0300 Belize Radio One: News
0300 Christian Science Monitor: News
0300 Deutsche Welle: World News
0300 HCJB: News [T-A]
0300 KVOH: UP! Radio News [T-A]
0300 Radio Australia: World and Australian News
0300 Radio Beijing: News
0300 Radio Canada Int'l: News [M-F]
0300 Radio for Peace Int'l: News [T-A]
0300 Radio Havana Cuba: Int'l News [M-A]
0300 Radio Japan: News
0300 Radio Kivu: News
0300 Radio Moscow: News
0300 Radio New Zealand Int'l: News [A-S]
0300 Radio Prague: News
0300 Voice of America: News
0300 Voice of China: News and Commentary
0309 BBC: News About Britain
0310 Radio Beijing: News About China
0310 Radio China: News
0315 Radio France International: News
0315 Radio Havana Cuba: Cuban National News
0330 Christian Science Monitor (East Africa): News [M]

0334 BBC: Waveguide. See S 0750.
0334 Christian Science Monitor (East Africa): Letterbox. See M 0334.
0340 BBC: Words of Faith. See S 0540.
0345 BBC: Recording of the Week. A personal choice from the latest classical music releases.
0306 Christian Science Monitor: News Focus. See M 0206.
0309 Deutsche Welle: Morning Magazine. See M 0209.
0330 BBC: Feature. See S 1401.
0306 Christian Science Monitor: Letterbox. See M 0334.
1106 Christian Science Monitor: One Norway Street. See M 0306.
1109 Deutsche Welle: Newsline Cologne. A current affairs program with worldwide reports and a German press review.
1115 BBC: Tech Talk. What's new in the world of engineering.
1130 BBC: The Ken Bruce Show. See S 0230.
1134 Christian Science Monitor: Letterbox. See M 0334.
1134 Deutsche Welle: Hallo Africa. Musical requests and greetings to friends.
1200 Christian Science Monitor: News Focus. See M 0206.
1215 BBC: Quiz. A topical quiz show; details not available at press time.
1234 Christian Science Monitor: Kaleidoscope. See M 0334.
1246 BBC: Sports Roundup. See S 1330.
1306 Christian Science Monitor: One Norwich Street. See M 0306.
1308 Radio Canada Int'l: Current Affairs. In-depth news programming.
1309 BBC: Twenty-Four Hours. See S 0509.
1330 BBC: Aid with a Human Face. See S 1615.
1405 BBC: Outlook. Conversation, controversy, and color from Britain and the rest of the world.
1406 Christian Science Monitor: News Focus. See M 0206.
Tim Smith now takes over "Multitrack 1," broadcast on Mondays. Graham Bannerman presents "Multitrack 2," a program of pop news and potential hits, on Wednesdays, and the ever-present Sarah Ward is the DJ for "Multitrack 3," offering alternative rock music, on Fridays.

The "Multitrack" programs can be heard at 2330 UTC, repeated on the following day at 1215 UTC. "The Vintage Chart Show" airs at 0330 UTC on Saturdays.

**BBC CHRISTMAS PROGRAMS:** The BBC will preempt normal programming at times on December 24-26 to present special Christmas programs. While specific details were not available at press time, listeners should listen for "The Festival of Nine Lessons and Carols," a program heard on December 25th at 0030 UTC. (For listeners in North America, that's on the evening of Christmas Eve.) Simply a must listen!

**HCJB SCHEDULE SHUFFLE:** HCJB, the religious broadcaster in Ecuador, has dropped the Sunday broadcasts of "DX Party Line," their popular program about shortwave radio. The 0200 UTC and 0600 UTC slots will be filled by Ken MacHarg's international goodwill program, "Saludos Amigos." "DX Party Line" can still be heard at the above times on Tuesdays.

**BBC MUSIC SHAKE-UP:** Paul Burnett, the popular presenter for 13 years of the BBC's top twenty music singles, has left the chart show "Multitrack 1" to take over "The Vintage Chart Show," from Jimmy Savile.

**0030** BBC: Megamix. A compendium of music, sport, fashions, health, travel, and events, making music, sport, fashion, health, travel, news and views for young people.

**0030** Radio Canada Int'l: As It Happens. A detailed look at the people and events making news, from a Canadian perspective.

**0034** Christian Science Monitor: Kaleidoscope. See M 0234.

**0101** BBC: Outlook. See M 1405.

**0106** Christian Science Monitor: One Norway Street. See M 0309.

**0110** Deutsche Welle: Newsline Cologne. See M 1109.

**0125** BBC: Financial News. See M 2310.

**0130** BBC: Short Story. Brief tales written by BBC listeners.

**0134** Christian Science Monitor: Letterbox. See M 0334.

**0134** Deutsche Welle: Arts on the Air. See S 1109.

**0145** BBC: Europe's World. A magazine program reflecting life in Europe and its links with other parts of the world.

**0200** Radio Canada Int'l: As It Happens. See T 0030.

**0206** Christian Science Monitor: News Focus. See M 0236.

**0209** BBC: British Press Review. See S 0209.

**0209** Deutsche Welle: Morning Magazine. See M 0209.

**0215** BBC: Network UK. A look at the issues and events that affect the lives of people throughout the UK.

**0230** BBC: Sports International. Feature program on a topic or person making sports headlines.

**0234** Christian Science Monitor: Kaleidoscope. See M 0234.

**0234** Deutsche Welle: Economic Notebook. A look at the economic scene in Germany and around the world.

**0300** Christian Science Monitor: News [T-F]

**0300** KVOH: UPI Headline News [T-A]

**0300** Radio Berlin Int'l: News [M-A]

**0300** Radio Havana Cuba: News [M-A]

**0300** Radio Moscow (World Service): News [M]

**0300** Radio Netherlands: News [T-S]

**0300** Radio Tirana, Albania: News

**0300** Radio Veneza: News

**0300** Radiotelevisione Italiana: News

**0300** Radio Prague: News Wrap-up

**0400** BBC: Newsdesk

**0400** Christian Science Monitor: News

**0400** Deutsche Welle: World News

**0400** HCJB: News [M-A]

**0400** Radio Australia: International Report

**0400** Radio Berlin Int'l: News [M-A]

**0400** Radio Canada Int'l: News [M-F]

**0400** Radio Havana Cuba: Int'l News [M-A]

**0400** Radio Moscow: News

**0400** Radio New Zealand Int'l: News

**0400** Radio RSA: News

**0400** RAE, Buenos Aires: News

**0400** Swiss Radio Int'l: News

**0400** Voice of America: News

**0410** Radio Beijing: News About China

**0425** Radiotelevisione Italiana: News

**0430** Christian Science Monitor (East Africa): News [M]

**0430** Christian Science Monitor: News [T-F]

**0430** Radio Havana Cuba: Newsbreak [M-A]

**0430** Radio Moscow (World Service): News in Brief [S]

**0430** Radio Netherlands: News [M-A]

**0430** Radio Tirana, Albania: News

**0435** Radio Australia: World News

**0500** BBC: World News

**0500** Christian Science Monitor: News

**0500** Deutsche Welle: World News

**0500** HCJB: News [S-M]: Latin American News [T-A]

**0500** Koi Israel: News

**0500** Radio Australia: World and Australian News

**0500** Radio Havana Cuba: Int'l News [M-A]

**0500** Radio Japan: News

**0500** Radio Moscow: News

**0500** Radio New Zealand Int'l: News

**0500** Spanish National Radio: News

**0500** Voice of America: News

**0515** Radio Havana Cuba: Cuban National News [M-A]

**0530** Christian Science Monitor (East Africa): News [M]

**0530** Christian Science Monitor: News [T-F]

**0530** Radio Havana Cuba: News [M-A]

**0530** Radio Moscow (World Service): News in Brief [S]

**0555** Spanish National Radio: News Summary [S]

**0555** HCJB: News [S]

**0600** BBC: Newsdesk

**0600** Christian Science Monitor: News

**0600** Deutsche Welle: World News

**0600** HCJB: News [M]

**0600** Radio Australia: International Report

**0600** Radio Berlin Int'l: News

**0600** Radio Havana Cuba: Int'l News [M-A]

**0600** Radio Korea: News

**0600** Radio Moscow: News

**0600** Radio Netherlands: News [T-H]

**0600** Radio: Voice of America: News

**0615** Radio Berlin Int'l: News
Ian McFarland is the producer and host for Radio Canada International's DX program, "SWL Digest."


Wednesday
0006 Christian Science Monitor: News Focus. See M 3.06.
0030 BBC: Omnibus. See T 1.16.
0030 Radio Canada Int'l: As It Happens. See T 3.00.
0109 Christian Science Monitor: Feature. Programming on various subjects. See M 3.34.
0134 Christian Science Monitor: Letterbox. See M 3.34.
0206 Radio Canada Int'l: Newsbreak. See F 3.09.
0245 BBC: Country Style. David Allen presents British country music.
0300 Radio Canada Int'l: As It Happens. See T 3.00.
0306 Christian Science Monitor: News Focus. See M 3.06.
0309 BBC: British Press Review. See S 2.09.
0320 Deutsche Welle: Evening Magazine. See M 2.09.
03:25 BBC: Tech Talk. See M 1.15.
0404 Radio Canada Int'l: Shortwave Listeners' Digest. See S 01.08.
0406 Christian Science Monitor: News Focus. See M 3.06.
0409 Deutsche Welle: Morning Magazine. See M 2.09.
0430 BBC: Off the Shelf. See M 3.40.
0445 BBC: Country Style. See W 01.15.
0506 Christian Science Monitor: One Norway Street. See M 3.06.
0509 BBC: Twenty-Four Hours. See S 05.09.
0509 Deutsche Welle: Newsline Cologne. See M 3.10.
0540 BBC: Words of Faith. See S 05.40.
0545 BBC: The World Today. See M 3.16.
0556 Christian Science Monitor: News Focus. See M 3.06.
0600 Deutsche Welle: Morning Magazine. See M 2.09.
0630 BBC: Meridian. The world of the arts, including music, drama, and books.
Deutsche Weile: Living in Germany. The social scene in Germany.


Christian Science Monitor: News Focus. See M 0206.


BBC: The World Today. See M 1645.

BBC: Commentary. See M 2305.


BBC: Good Books. See M 0315.

BBC: Multitrack. Graham Bannerman presents the latest in British pop music and news.


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**Thursday**

**Dec 7th, 14th, 21st, 28th**

0000 Christian Science Monitor: News Focus. See M 0206.

0020 BBC: Comedy Show. See W 1530.

0030 Radio Canada Int'l: As It Happens. See T 0600.


0045 BBC: Outlook. See M 1405.

0010 BBC: Comedy Show. See M 0306.

0090 Deutsche Weile: Newsline Cologne. See M 1109.

0125 BBC: Financial News. See M 2310.

0130 BBC: Waveguide. See M 0750.

0134 Christian Science Monitor: Letterbox. See M 0334.

0134 Deutsche Weile: Living in Germany. See M 1534.

0140 BBC: Book Choice. See S 0745.

0145 BBC: Society Today. A weekly look at the changes in Britain.

0200 Radio Canada Int'l: As It Happens. See T 0300.


1200 Radio Finland: Northern Report. [T-F]


1300 Voice of America: News.


1325 HCJB: News [M-F].

1340 Christian Science Monitor: News [M-F].

1330 Radio Moscow (World Service): News in Brief [S-M].


1330 Voice of America: News (Special English).


1352 Radio RSA: News in Brief.

1400 BBC: News Summary [A-S]: Five-Minute News [M-F].


1400 Radio Canada Int'l: News [S].


1400 Radio Korea: News.


1400 Radio Tirana, Albania: News.

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MONITORING TIMES December 1989
world radio monitoring

**December 1989**

**MONITORING TIMES**

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**news guide cont'd from p.61**

<table>
<thead>
<tr>
<th>Time</th>
<th>Station</th>
<th>Frequency</th>
<th>Language</th>
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<td>WWCR: News</td>
<td>M [F]</td>
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<td>Christian Science Monitor: News [M-F]</td>
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<td>Deutsche Welle: African News [M-F]</td>
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<td>Radio Moscow (World Service): News in Brief</td>
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<td>Radio IRA: News in Brief</td>
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<td>Voice of America: News</td>
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<td>BBC: News About Britain</td>
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<td>HCB: News [M-F]</td>
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<td>Radio Netherlands: News [M-A]</td>
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<td>1630</td>
<td>Radio Peace and Progress: News</td>
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<td>Voice of America (except Africa): News (Special English)</td>
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<td>Radio Berlin: News</td>
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<td>Radio Anton: News</td>
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<td>BCC: World News [S-F]; News Summary [A]</td>
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<td>Radio Moscow (World Service): News in Brief</td>
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<td>Radio Colorado (World Service): News</td>
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<td>Voice of America: News</td>
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<td>Radio Canada: News</td>
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SUGGESTIONS?  SOMETHING MISSING?
Let u know your corrections, additions, and suggestions of what you'd like to see in Program Manager Kanon, Shanumag at 4412 Tunberry Circle, Lawrence, Kansas 66047.

**Saturday**

**Dec 2nd, 9th, 16th, 23th, 30th**

0030 Radio Canada Int'l: As It Happens. See T 0030.
0045 BBC: Recording of the Week. See M 0045.
0101 BBC: Outlook. See M 1045.
0110 Deutsche Welle: Newsline Cologne. See M 1109.
0130 BBC: Behind the Wall. Colin Thubron's account of his travels across China.
0134 Deutsche Welle: Random Selection. Larry Wayne takes a look at Germany from the lighter side.
0145 BBC: Book Choice. See S 0745.
0200 Radio Canada Int'l: As It Happens. See T 0030.
0209 Deutsche Welle: Commentary. See S 0109.
0215 BBC: Network UK. See T 0215.
0230 BBC: People and Politics. Background to the British political scene.
0234 Deutsche Welle: Man and Environment. A program on all topics relating to the environment in industrial and developing countries.
0309 Deutsche Welle: Newline Cologne. See M 1109.
0315 BBC: The World Today. See M 1645.
0327 Deutsche Welle: Caribbean Report. See A 0127.
0330 BBC: The Vintage Chart Show. Paul Burnett presents top ten hits from the music charts of yesteryear.
0334 Deutsche Welle: Random Selection. See A 0134.
0409 Deutsche Welle: Africa Highlight. A weekly feature on an important topic concerning Africa.
0423 Deutsche Welle: Development Forum. Reports and interviews on projects and progress in Africa.
0430 BBC: Here's Humph! That jazz with Humphrey Lyttelton.
0434 Deutsche Welle: Science and Technology. See M 0209.
0445 BBC: Personal View. See A 0030.
0509 BBC: Twenty-Four Hours. See S 0509.
0509 Deutsche Welle: Newsline Cologne. See M 1109.
0527 Deutsche Welle: Caribbean Report. See A 0127.
0534 Deutsche Welle: Random Selection. See A 0134.
0540 BBC: Words of Faith. See S 0540.
0545 BBC: The World Today. See M 1645.
0609 Deutsche Welle: Africa Highlight. See A 0409.
0623 Deutsche Welle: Development Forum. See A 0127.
0630 BBC: Meridian. See W 0630.
0634 Deutsche Welle: Science and Technology. See M 0324.
0709 BBC: Twenty-Four Hours. See S 0509.
0730 BBC: From the Weeklies. See F 2315.

**news guide cont'd from p.63**

2100 Belize Radio One: News [M-F]
2100 BRT, Brussels: News.
2100 Christian Science Monitor: News
2100 Deutsche Welle: World News
2100 Radio Finland: Northern Report [M-F]
2100 Radio Japan: News
2100 Radio Moscow (World Service): News
2100 Radio New Zealand Int'l: News
2100 Radio Peace and Progress: News
2100 Spanish National Radio: News
2100 Swiss Radio Int'l: News
2100 Voice of America: News
2130 Christian Science Monitor: News [M-F]
2130 KVOH: UPI Radio News
2130 Radio Budapest: News
2130 Radio Canada Int'l: News
2130 Radio Moscow (World Service): News in Brief
2200 BBC: Newsround

2200 Christian Science Monitor: News
2200 KVOH: UPI Radio News
2200 Radio Australia: International Report
2200 Radio Berlin Int'l: News
2200 Radio Canada Int'l (Asia): News
2200 Radio Canada Int'l (Western Europe): News [A-S]; The World at Six [M-F]
2200 Radio Havana Cuba: Int'l News [M-A]
2200 Radio Moscow (World Service): News [A-S]; The World at Six [M-F]
2200 Radiotelevisione Italiana: News
2200 RAE, Buenos Aires: News
2200 Voice of America: News
2200 Voice of Free China: News and Commentary
2230 Christian Science Monitor: News [M-F]
2230 Kol Israel: News
2230 KVOH: UPI Headline News
2230 Radio Havana Cuba: Cuban National News [M-A]
2230 Radio Moscow (World Service): News in Brief [A-S]
2230 Voice of America: News (Special English)
2245 Radio Berlin Int'l: News
2300 BBC: World News [A-S]; Five-Minute News [M-F]

2300 Belize Radio One: News [M-F]
2300 Christian Science Monitor: News
2300 KVOH: UPI Radio News
2300 Radio Australia: World and Australian News
2300 Radio Canada Int'l: News [F]
2300 Radio Japan: News
2300 Radio Moscow: News
2300 Voice of America: News
2300 Voice of Turkey: News
2330 BRT, Brussels: News
2330 Australian Broadcasting: News [M-F]
2330 KVOH: UPI Headline News
2330 Radio for Peace Int'l: News [M]
2330 Radio Korea: News
2330 Radio Moscow (World Service): News in Brief [A-S]
2330 Radio Polonia: News
2330 Radio Tirana, Albania: News
2335 Voice of Greece: News [S]

0745 BBC: Network UK. See T 0215.
1109 Deutsche Welle: Panorama. A review of the major events of the week.
1115 BBC: Behind the Wall. See A 0130.
1130 BBC: Midlands. See W 0630.
1134 Deutsche Welle: Mailbag Africa. Listeners' questions, music requests, and the club corner.
1215 BBC: Multitrack 3. See F 2330.
1245 BBC: Sports Roundup. See S 1330.
1309 BBC: World at Six. See S 0509.
1330 BBC: Network UK. See T 0215.
1345 BBC: Short Story. See T 0130.
1401 BBC: The Ken Bruce Show. See S 0230.
1430 BBC: Sportsworld. Saturday sports, including a preview of English and Scottish soccer matches.
1509 Deutsche Welle: Commentary. See S 0109.
1513 Deutsche Welle: Africa This Week. A review of trends and events on the African continent.
1534 Deutsche Welle: Man and Environment. See A 0234.
1609 Deutsche Welle: Panorama. See A 1109.
1615 BBC: Sportsworld. Commentary on an English or Scottish soccer match.
1623 Deutsche Welle: Development Forum. See A 0127.
1634 Deutsche Welle: Religion and Society. See S 0409.
2309 BBC: Book Choice. See S 0745.
2315 BBC: A Jolly Good Show. See T 1515.
**MT Monitoring Team**

**Greg Jordan,**
**Frequency Manager**
1855-I Franciscan Terrace
Winston-Salem, NC 27127

**Joe Hanlon**
Philadelphia, Pennsylvania

**Richard A. Keen**
Golden, Colorado

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**0000 UTC [7:00 PM EST/4:00 PM PST]**

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<th>Time</th>
<th>Station Name</th>
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<td>BBC, London, England</td>
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<tr>
<td>0000-0030</td>
<td>Kol Israel, Jerusalem</td>
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**0100 UTC [8:00 PM EST/5:00 PM PST]**

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<td>Voice of America, Washington</td>
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<td>WHRI, Noblesville, Indiana</td>
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<td>WRNO, New Orleans, Louisiana</td>
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<td>IRR WWCR, Nashville, Tennessee</td>
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<td>Radio Klev, Ukrainian SSR</td>
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<td>Radio Klev, Ukrainian SSR</td>
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**LEGEND**

- The first four digits of an entry are the broadcast start time in UTC.
- The second four digits represent the end time.
- In the space between the end time and the station name is the broadcast schedule.

*S=Sunday M=Monday T=Tuesday W=Wednesday
H=Thursday F=Friday A=Saturday

If there is no entry, the broadcasts are heard daily. If, for example, there is an entry of "M," the broadcast would be heard only on Mondays. An entry of "M,W,F" would mean Mondays, Wednesdays and Fridays only. "M-F" would mean Mondays through Fridays. "TEN" indicates a tentative schedule and "TES" a test transmission.

The last entry on a line is the frequency. Several codes may be found after a frequency as follows:

- **SSB** Indicates Single Sideband transmission.
- **v** after a frequency indicates that it varies
- **Notations of USB and LSB (upper and lower sideband transmissions) usually refer only to the individual frequency after which they appear.
- **[ML]** after a frequency indicates a multi-lingual transmission containing English-language programs. All other frequencies may be assumed to be English language programs directed to various parts of the world.
- **Listings followed by an asterisk (*) are for English lessons and do not contain regularly scheduled programming.**

We suggest that you begin with the lower frequencies that a station is broadcasting on and work your way up the dial. Remember that there is no guarantee that a station will be audible on any given day. Reception conditions can change rapidly, though, and if it is not audible one night, it may well be on another.

---

**HOW TO USE THE PROPAGATION CHARTS**

Propagation charts can be an invaluable aid to the DXer in determining which frequencies are likely to be open at a given time. To use the propagation charts, choose those for your location (the are divided into east coast, midwest and west coast of North America). Then look for the one most closely describing the geographic location of the station you want to hear.

Once you've located the correct charts, look along the horizontal axis of the graph for the time that you are listening. The top line of the graph shows the Maximum Useable Frequency [MUF] and the lower line the Lowest Useable Frequency [LUF] as indicated on the vertical axis of the graph.

While there are exceptions to every rule (especially those regarding shortwave listening), you should find the charts helpful in determining the best times to listen for particular regions of the world. Good luck!
<table>
<thead>
<tr>
<th>Time</th>
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<th>Station and Information</th>
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<td>6930</td>
<td>Kol Israel, Jerusalem</td>
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<td>6930</td>
<td>Radio Berlin Intl, E. Germany</td>
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<td>Radio Japan, Tokyo</td>
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**MONITORING TIMES**

East Coast To Western Europe

- **East Coast**
  - **UTC**: 00:00 - 05:00
  - **Frequency**: 6910 - 7050 MHz

- **Western Europe**
  - **UTC**: 06:00 - 11:00
  - **Frequency**: 6910 - 7050 MHz

East Coast To Eastern Europe

- **East Coast**
  - **UTC**: 00:00 - 05:00
  - **Frequency**: 6910 - 7050 MHz

- **Eastern Europe**
  - **UTC**: 06:00 - 11:00
  - **Frequency**: 6910 - 7050 MHz

East Coast To Arctic Europe

- **East Coast**
  - **UTC**: 00:00 - 05:00
  - **Frequency**: 6910 - 7050 MHz

- **Arctic Europe**
  - **UTC**: 06:00 - 11:00
  - **Frequency**: 6910 - 7050 MHz

**Notes**

- **Superpower KUSW, Utah**: 11695 MHz
- **Voice of America, Washington**: 5995 MHz
- **Voice of Indonesia, Jakarta**: 9680 MHz
- **WHRI, Noblesville, Indiana**: 7315 MHz
- **WINO New Orleans, Louisiana**: 7355 MHz
- **Voice of America, Washington**: 7205 MHz
- **Voice of America, Washington**: 7125 MHz
- **Voice of America, Washington**: 7125 MHz
- **Voice of America, Washington**: 7125 MHz
### Frequency Section

#### Monitoring Times

**East Coast To Middle East**

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<td>0400-0430</td>
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**0500 UTC** [12:00 PM EST/9:00 PM PST]

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<td>Radio Zambia, Luaka</td>
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<td>0500-0515</td>
<td>GBC, Accra, Ghana</td>
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<td>0500-0515</td>
<td>Kol Israel, Jerusalem</td>
</tr>
<tr>
<td>0500-0515</td>
<td>Vatican Radio, Vatican City</td>
</tr>
<tr>
<td>0500-0530</td>
<td>BBC, London, England</td>
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<tr>
<td>0500-0530</td>
<td>Radio Berin Int'l, E. Germany</td>
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<tr>
<td>0500-0530 S,M</td>
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<tr>
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<td>WRNO, New Orleans, Louisiana</td>
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<td>Voice of Mozambique, Maputo</td>
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<tr>
<td>0500-0550</td>
<td>Voice of Tanzania, Dar es Salaam</td>
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**East Coast To Central Asia**

- **MUF LUF**

**East Coast To South East Asia**

- **MUF LUF**

**East Coast To Indonesia**

- **MUF LUF**

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**Monitoring Times**

December 1989

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[www.americanradiohistory.com](http://www.americanradiohistory.com)
**Section: Frequency**

<table>
<thead>
<tr>
<th>Time Range</th>
<th>Station Name</th>
<th>Frequency</th>
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<tbody>
<tr>
<td>0500-0600</td>
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<td>0500-0600</td>
<td>Christian Science World Service</td>
<td>9455 MHz</td>
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<tr>
<td>0500-0600</td>
<td>CKWX, Vancouver, British Columbia</td>
<td>6080 MHz</td>
</tr>
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<td>0500-0600</td>
<td>CFRB, Toronto, Ontario</td>
<td>6970 MHz</td>
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<td>HCJB, Quito, Ecuador</td>
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<td>Radio 5, South Africa</td>
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<td>Radio Beijing, China</td>
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<td>Radio Havana Cuba</td>
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<td>Radio Japan, Tokyo</td>
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<td>Radio Moscow, USSR</td>
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<td>Radio New Zealand, Wellington</td>
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<td>Radio Thailand, Bangkok</td>
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<td>Spanish National Radio, Madrid</td>
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<td>S Swaziand Commercial Radio</td>
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<td>TTI, Costa Rica</td>
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<td>Trans World Radio, Swaziland</td>
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<td>Ghana Broadcasting Corp., Accra</td>
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<td>0555-0600</td>
<td>Voice of Malaysia, Kuala Lumpur</td>
<td>6175 MHz</td>
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**0600 UTC** [1:00 AM EST/10:00 PM PST]

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<th>Time Range</th>
<th>Station Name</th>
<th>Frequency</th>
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<tbody>
<tr>
<td>0600-0615</td>
<td>Radio Ghana, Accra</td>
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<td>0600-0615</td>
<td>Radio Zambia, Lusaka</td>
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<tr>
<td>0600-0620</td>
<td>Vatican Radio, Vatican City</td>
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<tr>
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<td>F FEBA, Mahe, Seychelles</td>
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<td>0600-0630</td>
<td>Laotian National Radio</td>
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<td>Radio Australia, Melbourne</td>
<td>11910 MHz</td>
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<td>0600-0630</td>
<td>S Radio Norway Int'l, Oslo</td>
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<td>0600-0630</td>
<td>Trans World Radio, Swaziland</td>
<td>6070 MHz</td>
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<tr>
<td>0600-0630</td>
<td>Voice of Kenya, Nairobi</td>
<td>6045 MHz</td>
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<td>0600-0645</td>
<td>S Radio Cameroon, Yaounde</td>
<td>6850 MHz</td>
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<td>0600-0650</td>
<td>Deutsche Welle, West Germany</td>
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<td>0600-0650</td>
<td>Radio Pyongyang, North Korea</td>
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<td>BBC, London, England</td>
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<td>CKWX, Vancouver, British Columbia</td>
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<td>CFRB, Toronto, Ontario</td>
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<td>HCJB, Quito, Ecuador</td>
<td>9745 MHz</td>
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<td>0600-0700</td>
<td>King of Hope, South Lebanon</td>
<td>6215 MHz</td>
</tr>
<tr>
<td>0600-0700</td>
<td>Radio Havana Cuba</td>
<td>11835 MHz</td>
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<td>0600-0700</td>
<td>Radio Jordan, Amman</td>
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<td>0600-0700</td>
<td>Radio Korea, Seoul, South Korea</td>
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<td>0600-0700</td>
<td>Radio Moscow, USSR</td>
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<td>0600-0700</td>
<td>Radio New Zealand, Wellington</td>
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**East Coast To Far East**

- **MHz. 50.00**
  - **MUF LUF**

**East Coast To Pacific**

- **MHz. 50.00**
  - **MUF LUF**

**East Coast To Australia**

- **MHz. 50.00**
  - **MUF LUF**

70 December 1989

MONT 044100

www.americanradiohistory.com
<table>
<thead>
<tr>
<th>Frequency</th>
<th>Station Name</th>
<th>City/Country</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.060-0.070</td>
<td>Radio Tonga, Tonga</td>
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<tr>
<td>0.060-0.070</td>
<td>Radio Zambira, Lusaka</td>
<td>11880</td>
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<td>0.060-0.070</td>
<td>Radio 5, South Africa</td>
<td>11880</td>
</tr>
<tr>
<td>0.060-0.070</td>
<td>SBC Radio One, Singapore</td>
<td>5052 11940</td>
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<tr>
<td>0.060-0.070</td>
<td>Voice of America, Washington</td>
<td>6035 6080 6095 6125</td>
</tr>
<tr>
<td>0.060-0.070</td>
<td>Voice of Asia, Taiwan</td>
<td>7295</td>
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<tr>
<td>0.060-0.070</td>
<td>Voice of Malaysia, Kuala Lumpur</td>
<td>6175 9750 15295</td>
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<tr>
<td>0.060-0.070</td>
<td>Voice of Nicaragua, Managua</td>
<td>6100</td>
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<tr>
<td>0.060-0.070</td>
<td>Voice of the Mediterranean</td>
<td>9765</td>
</tr>
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<td>0.060-0.070</td>
<td>WHRL, Noblesville, Indiana</td>
<td>9495 9620</td>
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<td>WMIL, Bethel, Pennsylvania</td>
<td>9465</td>
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<td>0.060-0.070</td>
<td>WYFR, Oakland, California</td>
<td>13760 11580</td>
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<td>0.060-0.070</td>
<td>WYFR Satellite, New, California</td>
<td>5985 6065 7355 9852.5</td>
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<td>Vaticano Radio, Vatican City</td>
<td>15190 17730</td>
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<tr>
<td>0.062-0.0700</td>
<td>Trans World Radio, Monte Carlo</td>
<td>7105</td>
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<td>0.063-0.0635</td>
<td>RTVC, Brazzaville, Congo</td>
<td>15190 irr</td>
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<td>0.063-0.0700</td>
<td>AWR, Forli, Italy</td>
<td>7125</td>
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<td>0.063-0.0700</td>
<td>Radio Australia, Melbourne</td>
<td>11910 15160 15240 15395</td>
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<td>0.063-0.0700</td>
<td>Radio Bucharest, Romania</td>
<td>21600</td>
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<tr>
<td>0.063-0.0700</td>
<td>Radio Finland, Helsinki</td>
<td>6120 9560 11755 17750 21740</td>
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<td>0.063-0.0700</td>
<td>Radio Polonia, Warsaw, Poland</td>
<td>6135 7270 15120</td>
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<td>0.063-0.0700</td>
<td>Swiss Radio Intl, Bern</td>
<td>6165 9535 12030 15430</td>
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<td>0.063-0.0700</td>
<td>Trans World Radio, Switzerland</td>
<td>17570 21520</td>
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<td>Vaticano Radio, Vatican City</td>
<td>9645 11740</td>
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<td>0.063-0.0700</td>
<td>Voice of Kenya, Nairobi</td>
<td>7270</td>
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<td>0.0645-0.0700</td>
<td>BBC, London, England*</td>
<td>6150 9600 11945</td>
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<td>Radio Ghana, Accra</td>
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<td>0.0645-0.0700</td>
<td>Radio Bucharest, Romania</td>
<td>11940 15250 15335 17790</td>
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<td>0.0645-0.0700</td>
<td>Radio China, Beijing</td>
<td>17805 21665</td>
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**0700 UTC** [2:00 AM EST/11:00 PM PST]

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<thead>
<tr>
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<th>Station Name</th>
<th>City/Country</th>
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<tbody>
<tr>
<td>0.0700-0.0730</td>
<td>Radio Bucharest, Romania</td>
<td>11940 15250 15335 17790</td>
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<td>0.0700-0.0730</td>
<td>Radio Australia, Melbourne</td>
<td>17905 21665</td>
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<td>0.0700-0.0710</td>
<td>Radio Sierra Leone, Freetown</td>
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<tr>
<td>0.0700-0.0715</td>
<td>Radio Ghana (HS), Accra</td>
<td>3386 4915</td>
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<td>0.0700-0.0730</td>
<td>BBC, London, England</td>
<td>3955 5975 6195 7150</td>
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<td>0.0700-0.0730</td>
<td>Voice of America, Washington</td>
<td>9410 9600 9760 11940</td>
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<tr>
<td>0.0700-0.0730</td>
<td>WHRI, Accra</td>
<td>11940 15250 15335 17790</td>
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<tr>
<td>0.0700-0.0730</td>
<td>WHRI, Accra</td>
<td>17805 21665</td>
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**Monitoring Times**

**December 1989**

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**MHz.**

**East Coast To South America**

**East Coast To Central America/Caribbean**

**East Coast To West Coast**

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**www.americanradiohistory.com**
<table>
<thead>
<tr>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>0700-0850 ACB, Alice Springs, Australia</td>
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<tr>
<td>0700-0850 ACB, Katherine, Australia</td>
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<tr>
<td>0700-0850 ABC, Perth, Australia</td>
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<td>0700-0850 ABC, Tennant Creek, Australia</td>
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<tr>
<td>0700-0850 AFC, Alice Springs, Australia</td>
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<tr>
<td>0700-0850 AWR, Forti, Italy</td>
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<td>0700-0850 Australia, Melbourne</td>
</tr>
<tr>
<td>0700-0850 Austria, Czechoslovakia</td>
</tr>
<tr>
<td>0700-0850 Sundays, Kuala Lumpur</td>
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<tr>
<td>0700-0850 Vancouver, British Columbia</td>
</tr>
<tr>
<td>0700-0850 Voice of Korea, South Korea</td>
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<tr>
<td>0700-0850 Voice of South Korea</td>
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**December 1989**

**MONITORING TIMES**

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**East Coast To Alaska**

- **MHz.** | 50.00 | 40.00 | 30.00 | 20.00 | 10.00 | 0.00 | 0 | 4 | 8 | 12 | 16 | 20 | 24 |
- **UTC** | 0 | 4 | 8 | 12 | 16 | 20 | 24

**Midwest To Western Europe**

- **MHz.** | 50.00 | 40.00 | 30.00 | 20.00 | 10.00 | 0.00 |
- **UTC** | 0 | 4 | 8 | 12 | 16 | 20|

**Midwest To Eastern Europe**

- **MHz.** | 50.00 | 40.00 | 30.00 | 20.00 | 10.00 | 0.00 |
- **UTC** | 0 | 4 | 8 | 12 | 16 | 20 |

---

www.americanradiohistory.com
### Frequency Section

<table>
<thead>
<tr>
<th>Time</th>
<th>Station Information</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>0900-0950</strong></td>
<td><strong>Voice of America, Washington DC</strong> (17700 MHz)</td>
</tr>
<tr>
<td></td>
<td><strong>0900-0930</strong> <strong>Radio Beijing, China</strong> (5900 MHz)</td>
</tr>
<tr>
<td></td>
<td><strong>0900-0925</strong> <strong>Radio Netherlands, Hilversum</strong> (17575 MHz)</td>
</tr>
<tr>
<td></td>
<td><strong>0900-0900</strong> <strong>Swiss Radio Intl., Berne</strong> (5385 MHz)</td>
</tr>
<tr>
<td><strong>0900-0900</strong></td>
<td><strong>S Bhutan Basting Service, Thimpu</strong> (5385 MHz)</td>
</tr>
<tr>
<td><strong>0900-0900</strong></td>
<td><strong>S FEBJ, Manila, Philippines</strong> (11850 MHz)</td>
</tr>
<tr>
<td><strong>0900-0900</strong></td>
<td><strong>ABC, Perth, Australia</strong> (6130 MHz)</td>
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<tr>
<td><strong>0830-0859</strong></td>
<td><strong>Radio Prague, Czechoslovakia</strong> (6185 MHz)</td>
</tr>
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<td><strong>0900-0900</strong></td>
<td><strong>Swiss Radio Intl., Berne</strong> (5385 MHz)</td>
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<td><strong>0840-0859</strong></td>
<td><strong>M-A Voice of Greece, Athens</strong> (9855 MHz)</td>
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<td><strong>0840-0900</strong></td>
<td><strong>S-F Trans World Radio, Monte Carlo</strong> (7105 MHz)</td>
</tr>
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<td><strong>0847-0900</strong></td>
<td><strong>S Radio Korea, Seoul</strong> (11850 MHz)</td>
</tr>
<tr>
<td><strong>0850-0900</strong></td>
<td><strong>All India Radio, New Delhi</strong> (5960 MHz)</td>
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**0900 UTC** (4:00 AM EST/1:00 AM PST)

<table>
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<tbody>
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<td><strong>All India Radio, New Delhi</strong> (5900 MHz)</td>
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<tr>
<td><strong>0900-0910</strong></td>
<td><strong>Trans World Radio, Monte Carlo</strong> (7105 MHz)</td>
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<tr>
<td><strong>0900-0910</strong></td>
<td><strong>Voice of Lebanon, Beirut</strong> (6548 MHz)</td>
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<td><strong>KTRW, Agana, Guam</strong> (15210 MHz)</td>
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<tr>
<td><strong>0900-0925</strong></td>
<td><strong>Radio Netherlands, Hilversum</strong> (17575 MHz)</td>
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<td><strong>0900-0930</strong></td>
<td><strong>Nippon Broadcasting Corp.</strong> (3935 MHz)</td>
</tr>
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<td><strong>0900-0930</strong></td>
<td><strong>Radio Beijing, China</strong> (11755 MHz)</td>
</tr>
<tr>
<td><strong>0900-0930</strong></td>
<td><strong>Radio Norway, Oslo</strong> (21710 MHz)</td>
</tr>
<tr>
<td><strong>0900-0930</strong></td>
<td><strong>A.S Radio Prague, Czechoslovakia</strong> (11685 MHz)</td>
</tr>
<tr>
<td><strong>0900-0950</strong></td>
<td><strong>Deutsche Welle, West Germany</strong> (5960 MHz)</td>
</tr>
</tbody>
</table>

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### Midwest To

#### Arctic Europe

<table>
<thead>
<tr>
<th>Time</th>
<th>Frequency (MHz)</th>
</tr>
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<tbody>
<tr>
<td>0000-0400</td>
<td>10.00</td>
</tr>
<tr>
<td>0400-0800</td>
<td>20.00</td>
</tr>
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<td>0800-1200</td>
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<tr>
<td>1200-1600</td>
<td>40.00</td>
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<tr>
<td>1600-2000</td>
<td>50.00</td>
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**Midwest To Middle East**

<table>
<thead>
<tr>
<th>Time</th>
<th>Frequency (MHz)</th>
</tr>
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<tbody>
<tr>
<td>0000-0400</td>
<td>10.00</td>
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<tr>
<td>0400-0800</td>
<td>20.00</td>
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<td>1200-1600</td>
<td>40.00</td>
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<td>1600-2000</td>
<td>50.00</td>
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**Midwest To West Africa**

<table>
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<tr>
<td>0000-0400</td>
<td>10.00</td>
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<tr>
<td>0400-0800</td>
<td>20.00</td>
</tr>
<tr>
<td>0800-1200</td>
<td>30.00</td>
</tr>
<tr>
<td>1200-1600</td>
<td>40.00</td>
</tr>
<tr>
<td>1600-2000</td>
<td>50.00</td>
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</table>

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**Monitoring Times**

- December 1989

**www.americanradiohistory.com**
<table>
<thead>
<tr>
<th>Time</th>
<th>Frequency</th>
<th>Country/Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>0930</td>
<td>Radio Canada Int'l, Montreal</td>
<td>5960 9755</td>
</tr>
<tr>
<td>0930</td>
<td>BBC, London, England*</td>
<td>9725 11955</td>
</tr>
<tr>
<td>0930</td>
<td>CBN, St. John's, Newfoundland</td>
<td>6160</td>
</tr>
<tr>
<td>0930</td>
<td>Radio Beijing, China</td>
<td>9700 11755 15440</td>
</tr>
<tr>
<td>0930</td>
<td>Radio Sweden Int'l, Stockholm</td>
<td>15390</td>
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<tr>
<td>0945</td>
<td>BBC, London, England*</td>
<td>5985 7180 9725 11955</td>
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<tr>
<td>0945</td>
<td>Radio Prague, Czechoslovakia</td>
<td>6055 7345 9505</td>
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<tr>
<td>1000</td>
<td>Radio RSA, South Africa</td>
<td>11605</td>
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<tr>
<td>1000</td>
<td>SBC Radio One, Singapore</td>
<td>5010 5052 11940</td>
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<tr>
<td>1000</td>
<td>Superpower KUSW, Utah</td>
<td>6135</td>
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<td>1000</td>
<td>Voice of America, Washington</td>
<td>6030 5965 9590 11720</td>
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<tr>
<td>1000</td>
<td>Voice of Kenya, Nairobi</td>
<td>11915 15425</td>
</tr>
<tr>
<td>1000</td>
<td>WHRI, Noblesville, Indiana</td>
<td>7270</td>
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<tr>
<td>1000</td>
<td>WYFR, Oakland, California</td>
<td>7355</td>
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<tr>
<td>1000</td>
<td>Radio Pakistan, Islamabad</td>
<td>15606 17660</td>
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<tr>
<td>1000</td>
<td>Voice of Asia, Taiwan</td>
<td>5986</td>
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<tr>
<td>1000</td>
<td>Radio Austria Int'l, Vienna</td>
<td>15450 21490</td>
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<tr>
<td>1000</td>
<td>BBC, London, England*</td>
<td>7180 9660 9725</td>
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<tr>
<td>1000</td>
<td>HCJB, Quito, Ecuador</td>
<td>6130 9745 11925</td>
</tr>
<tr>
<td>1000</td>
<td>Radio Netherlands, Hilversum</td>
<td>6020 9675</td>
</tr>
<tr>
<td>1000</td>
<td>Radio Berlin Int'l, E. Germany</td>
<td>7165</td>
</tr>
<tr>
<td>1000</td>
<td>Trans World Radio, Monte Carlo</td>
<td>7105</td>
</tr>
<tr>
<td>1000</td>
<td>Voice of Greece, Athens</td>
<td>11645 15630</td>
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<tr>
<td>1000</td>
<td>Radio Berlin Int'l, E. Germany</td>
<td>6115</td>
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<td>1000</td>
<td>Radio Budapest, Hungary</td>
<td>7220 9585 9835 11910</td>
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<tr>
<td>1000</td>
<td>Radio Prague, Czechoslovakia</td>
<td>15160 15220</td>
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<td>1000</td>
<td>Trans World Radio, Bonaire</td>
<td>11815 15345</td>
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<td>1000</td>
<td>Trans World Radio, Monte Carlo</td>
<td>7105</td>
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**1100 UTC**
- **[6:00 AM EST/3:00 AM PST]**

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<th>Time</th>
<th>Frequency</th>
<th>Country/Region</th>
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<tbody>
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<td>1100</td>
<td>Radio Pakistan, Islamabad</td>
<td>6090 7290</td>
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<tr>
<td>1100</td>
<td>Radio Pakistan, Islamabad</td>
<td>15806 17760</td>
</tr>
<tr>
<td>1100</td>
<td>Radio Netherlands, Hilversum</td>
<td>6020 9675</td>
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<tr>
<td>1100</td>
<td>BBC, London, England*</td>
<td>7120</td>
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<tr>
<td>1100</td>
<td>HCJB, Quito, Ecuador</td>
<td>6130 9745 11925</td>
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<tr>
<td>1100</td>
<td>Kol Israel, Jerusalem</td>
<td>11585 15485 15650 17575</td>
</tr>
<tr>
<td>1100</td>
<td>KTWR, Guam*</td>
<td>9820 11665</td>
</tr>
<tr>
<td>1100</td>
<td>Radio Berlin Int'l, E. Germany</td>
<td>6115</td>
</tr>
<tr>
<td>1100</td>
<td>Radio Finland, Helsinki</td>
<td>11290 21560</td>
</tr>
<tr>
<td>1100</td>
<td>Radio Mozambique, Maputo</td>
<td>9525 11818 11835</td>
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<tr>
<td>1100</td>
<td>SLBC, Colombo, Sri Lanka</td>
<td>11835 15120 17850 [ML]</td>
</tr>
<tr>
<td>1100</td>
<td>Swiss Radio Int'l, Berne</td>
<td>13635 15570 17830 21770</td>
</tr>
<tr>
<td>1100</td>
<td>Voice of Vietnam, Hanoi</td>
<td>9840 15010</td>
</tr>
<tr>
<td>Frequency</td>
<td>Station Name and Location</td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------------</td>
<td></td>
</tr>
<tr>
<td>1600-1630</td>
<td>Voice of Indonesia, Jakarta</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Voice of Kenya, Nairobi</td>
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<tr>
<td></td>
<td>Voice of Malaysia, Kuala Lumpur</td>
<td></td>
</tr>
<tr>
<td>1500-1530</td>
<td>WHRL, Nobleville, Indiana</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WRNO, New Orleans, Louisiana</td>
<td></td>
</tr>
<tr>
<td></td>
<td>WWCR, Nashville, Tennessee</td>
<td></td>
</tr>
<tr>
<td>1650-1700</td>
<td>Radio Prague, Czechoslovakia</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Radio Sofia, Bulgaria</td>
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</tr>
<tr>
<td></td>
<td>Radio Sweden, Stockholm</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Radio Tanzania, Dar es Salaam</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Radio Tirana, Albania</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Radio-Television Morocco, Rabat</td>
<td></td>
</tr>
<tr>
<td>1500-1600</td>
<td>Swiss Radio Intl, Berne</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Voice of Asia, Taiwan</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Voice of Greece, Athens</td>
<td></td>
</tr>
<tr>
<td>1500-1600</td>
<td>Vatican Radio, Vatican City</td>
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</tr>
<tr>
<td></td>
<td>Voice of Vietnam, Hanoi</td>
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<tr>
<td>1400-1500</td>
<td>H-S, KTWR, Agana, Guam</td>
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**MONITORING TIMES**

**December 1989**
### 1700 UTC [12:00 PM EST/9:00 AM PDT]

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<thead>
<tr>
<th>Frequency</th>
<th>Station</th>
<th>Broadcast Region</th>
</tr>
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<tbody>
<tr>
<td>1700-1705</td>
<td>Radio Uganda, Kampala</td>
<td>4976 5026</td>
</tr>
<tr>
<td>1700-1715 M-A</td>
<td>Voice of Namibia (Angola)</td>
<td>11955</td>
</tr>
<tr>
<td>1700-1725</td>
<td>Radio Budapest, Hungary</td>
<td>6110 9585 9835 11910</td>
</tr>
<tr>
<td>1700-1725</td>
<td>Radio Netherlands, Hilversum</td>
<td>6020 15570</td>
</tr>
<tr>
<td>1700-1730</td>
<td>Radio Australia, Melbourne</td>
<td>9895 6060 6080 7205</td>
</tr>
<tr>
<td>1700-1730</td>
<td>Radio Berlin Intl, E. Germany</td>
<td>15340</td>
</tr>
<tr>
<td>1700-1730</td>
<td>Radio Japan, Tokyo</td>
<td>9695 11815 11865</td>
</tr>
<tr>
<td>1700-1730 S</td>
<td>Radio Norwegian Intl, Oslo</td>
<td>21705</td>
</tr>
<tr>
<td>1700-1730</td>
<td>Radio Sweden Intl, Stockholm</td>
<td>6065 9655</td>
</tr>
<tr>
<td>1700-1730</td>
<td>SLBC, Colombo, Sri Lanka</td>
<td>11800</td>
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<tr>
<td>1700-1745</td>
<td>BBC, London, England</td>
<td>9410 9515 9740 11750</td>
</tr>
<tr>
<td>1700-1750</td>
<td>Radio Pyongyang, North Korea</td>
<td>7290 9345 9640 9977</td>
</tr>
<tr>
<td>1700-1755</td>
<td>Radio Beijing, China</td>
<td>9570 9750 11575</td>
</tr>
</tbody>
</table>

**West Coast To Central Africa**

![MUF LUF](MHz)

**West Coast To South Africa**

![MUF LUF](MHz)

**West Coast To East Africa**

![MUF LUF](MHz)
<table>
<thead>
<tr>
<th>Frequency Section</th>
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</thead>
</table>

### 1900-1855
- **Radio Polonia, Warsaw, Poland**: 5995 MHz
- **BRT, Brussels, Belgium**: 9525 MHz, 11840 MHz
- **BBC, London, England**: 5915 MHz, 11685 MHz, 7325 MHz, 9410 MHz, 9740 MHz, 11750 MHz, 12095 MHz, 15070 MHz, 15245 MHz, 15400 MHz, 17695 MHz, 17880 MHz
- **Radio Berlin Int'l, E. Germany**: 9665 MHz, 13610 MHz, 15145 MHz, 15255 MHz
- **Radio Canada Int'l, Montreal**: 13650 MHz, 15325 MHz, 17875 MHz, 21675 MHz
- **Radio Korea, Seoul, South Korea**: 9870 MHz, 15575 MHz
- **Radio Mozambique, Maputo**: 3265 MHz, 4855 MHz, 9618 MHz
- **Radio Netherlands, Hilversum**: 6020 MHz, 15560 MHz, 17805 MHz, 21685 MHz
- **Radio Sofia, Bulgaria**: 7245 MHz, 9560 MHz, 11725 MHz, 15330 MHz
- **Swiss Radio International, Berne**: 9885 MHz, 11955 MHz
- **Voice of Greece, Athens** (1845-1850 MHz, 1945-1950 MHz): 11845 MHz, 12045 MHz, 15630 MHz
- **Radio Senegal, Dakar**: 4950 MHz
- **All India Radio, New Delhi**: 7412 MHz, 11620 MHz

### 1900 UTC: [2:00 PM EST/11:00 AM PST]

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Countries</th>
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<tbody>
<tr>
<td>1900-1855</td>
<td>Radio Polonia, Warsaw, Poland</td>
</tr>
<tr>
<td>1900-1915</td>
<td>Radio Bangladesh, Dhaka</td>
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<tr>
<td>1900-1915</td>
<td>Radio Tanzania, Dar es Salaam</td>
</tr>
<tr>
<td>1900-1925</td>
<td>Radio Netherlands, Hilversum</td>
</tr>
<tr>
<td>1900-1925</td>
<td>Voice of Islamic Republic Iran</td>
</tr>
<tr>
<td>1900-1930</td>
<td>ABC, Alice Springs, Australia (M)</td>
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<tr>
<td>1900-1930</td>
<td>ABC, Tennant Creek, Australia (M)</td>
</tr>
<tr>
<td>1900-1930</td>
<td>Radio Afghanistan, Kabul</td>
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<tr>
<td>1900-1930</td>
<td>Radio Canada Int'l, Montreal</td>
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<tr>
<td>1900-1930</td>
<td>Radio Japan, Tokyo</td>
</tr>
<tr>
<td>1900-1930</td>
<td>Radio Kiev, Ukrainian SSR</td>
</tr>
<tr>
<td>1900-1930</td>
<td>Radio Norway Int', Oslo</td>
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<tr>
<td>1900-1930</td>
<td>Voice of Vietnam, Hanoi</td>
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<tr>
<td>1900-1955</td>
<td>Deutsche Welle, Koln, W. Germany</td>
</tr>
<tr>
<td>1900-1965</td>
<td>Radio Beijing, China</td>
</tr>
<tr>
<td>1900-2000</td>
<td>All India Radio, New Delhi</td>
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<tr>
<td>1900-2000</td>
<td>CBC Northern Quebec Service</td>
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<tr>
<td>1900-2000</td>
<td>CBN, St. John's, Newfoundland</td>
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<tr>
<td>1900-2000</td>
<td>CBU, Vancouver, British Colombia</td>
</tr>
<tr>
<td>1900-2000</td>
<td>CFCF, Montreal, Quebec</td>
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<tr>
<td>1900-2000</td>
<td>CFCH, Calgary, Alberta</td>
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<tr>
<td>1900-2000</td>
<td>CHNS, Halifax, Nova Scotia</td>
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<tr>
<td>1900-2000</td>
<td>Christian Science World Service</td>
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<tr>
<td>1900-2000</td>
<td>CKWX, Vancouver, British Colombia</td>
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<td>1900-2000</td>
<td>CFRB, Toronto, Ontario</td>
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<tr>
<td>1900-2000</td>
<td>HCJB, Quito, Ecuador</td>
</tr>
<tr>
<td>1900-2000</td>
<td>Radio Algiers, Algeria</td>
</tr>
<tr>
<td>1900-2000</td>
<td>Radio Australia, Melbourne</td>
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<tr>
<td>1900-2000</td>
<td>Radio Ghana, Accra</td>
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<tr>
<td>1900-2000</td>
<td>Radio Havana Cuba</td>
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<td>1900-2000</td>
<td>Radio Jordan, Amman</td>
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<td>1900-2000</td>
<td>Radio Kuwait, Kuwait</td>
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<td>1900-2000</td>
<td>Radio Malabo, Equatorial Guinea (M)</td>
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<td>1900-2000</td>
<td>Radio Moscow, USSR</td>
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<td>1900-2000</td>
<td>Radio Moscow British Service</td>
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<td>1900-2000</td>
<td>Radio New Zealand, Wellington</td>
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<td>1900-2000</td>
<td>Radio for Peace, Costa Rica</td>
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<td>1900-2000</td>
<td>Radio Prague, Czechoslovakia</td>
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<td>Radio Riyadh, Saudi Arabia</td>
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<td>1900-2000</td>
<td>Radio RSA, South Africa</td>
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<tr>
<td>1900-2000</td>
<td>Radio Zambesi, Lusaka</td>
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<tr>
<td>1900-2000</td>
<td>Spanish Foreign Radio, Madrid</td>
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<tr>
<td>1900-2000</td>
<td>Superpower KUSW, Utah</td>
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<tr>
<td>1900-2000</td>
<td>Swaziland Commercial Radio</td>
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<td>1900-2000</td>
<td>Trans World Radio Swaziland</td>
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<td>1900-2000</td>
<td>Voice of America, Washington</td>
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<td>1900-2000</td>
<td>Voice of Ethiopia, Addis Ababa</td>
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<td>Voice of Kenya, Nairobi</td>
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<tr>
<td>1900-2000</td>
<td>WHRI, Noblesville, Indiana</td>
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<tr>
<td>1900-2000</td>
<td>WINE, Red Lion, Pennsylvania</td>
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<td>WMLX, Bethel, Pennsylvania</td>
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<td>WRNO, New Orleans, Louisiana</td>
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<td>1900-2000</td>
<td>WWCR, Nashville, Tennessee</td>
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<td>1900-2000</td>
<td>WYFR, Okeechobee, Florida</td>
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<td>1910-1920</td>
<td>Radio Bolivia, Asuncion</td>
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<td>1910-1920</td>
<td>M-Ano, M-A</td>
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<td>1910-1930</td>
<td>Voice of Greece, Athens</td>
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<tr>
<td>1910-1930</td>
<td>Voice of Greece, Athens</td>
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<tr>
<td>1910-1930</td>
<td>WOYX, North Carolina</td>
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<tr>
<td>1910-1930</td>
<td>ABC, Katherine, Australia</td>
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<tr>
<td>1910-1930</td>
<td>Radio Beijing, China</td>
</tr>
<tr>
<td>1910-1930</td>
<td>Radio Canada Int'l, Vienna</td>
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</tbody>
</table>

### Monitoring Times

- **Africa**: 1845-1855 UTC
- **West Coast To South East Asia**: 1900-1855 UTC
- **West Coast To Far East**: 1900-1855 UTC
- **West Coast To Pacific**: 1900-1855 UTC
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December 1989
MONITORING TIMES
### 2200 UTC [5:00 PM EST/2:00 PM PST]

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Country/Location</th>
</tr>
</thead>
<tbody>
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<td>M-F ELWA, Monrovia, Liberia</td>
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<tr>
<td>2200-2205</td>
<td>Radio Damascus, Syria</td>
</tr>
<tr>
<td>2200-2210</td>
<td>Radio Sierra Leone, Freetown</td>
</tr>
<tr>
<td>2200-2215</td>
<td>M-A ABC, Alice Springs, Australia</td>
</tr>
<tr>
<td>2200-2215</td>
<td>M-A ABC, Tennant Creek, Australia</td>
</tr>
<tr>
<td>2200-2215</td>
<td>BBC, London, England*</td>
</tr>
<tr>
<td>2200-2215</td>
<td>M-F Voice of America, Washington</td>
</tr>
<tr>
<td>2200-2225</td>
<td>BRT, Brussels, Belgium</td>
</tr>
<tr>
<td>2200-2225</td>
<td>RAI, Rome, Italy</td>
</tr>
<tr>
<td>2200-2225</td>
<td>Vatican Radio, Vatican City</td>
</tr>
<tr>
<td>2200-2230</td>
<td>ABC, Katherine, Australia</td>
</tr>
<tr>
<td>2200-2230</td>
<td>All India Radio, New Delhi</td>
</tr>
<tr>
<td>2200-2230</td>
<td>CBC Northern Quebec Service</td>
</tr>
<tr>
<td>2200-2230</td>
<td>S KGEI, San Francisco, California</td>
</tr>
<tr>
<td>2200-2230</td>
<td>Radio Beijing, China</td>
</tr>
<tr>
<td>2200-2230</td>
<td>Radio Jordan, Amman</td>
</tr>
<tr>
<td>2200-2230</td>
<td>S Radio Norway Int'l, Oslo</td>
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<tr>
<td>2200-2230</td>
<td>Radio Prague, Czechoslovakia</td>
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<tr>
<td>2200-2245</td>
<td>BBC, London, England</td>
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<td>Radio Berlin Int'l, E. Germany</td>
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### 2300 UTC [6:00 PM EST/3:00 PM PST]

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### Monitoring Times December 1989

Send us your special QSLs and we'll copy and return them promptly, to be used as space permits (QSL editor, PO Box 98, Brastown, NC 28902).
I remember several years ago talking to the Responsible Official at a large American electronics firm. This was a nice fellow -- somebody I had come to know over the years -- and when we talked shop, more often than not, the result was a new and successful product.

Back then, this fellow was open to ideas about everything -- except shortwave radio. For years they had produced a well-known receiver, but its sales were falling by the year. Never mind that the radio sounded awful. Never mind that you could hardly tell where you were tuning. And that it had no clock to let you know World Time, or UTC. As far as he was concerned, the market was dying and there was no point in coming out with a better model.

World Clock/Map Aids Listening

Radio manufacturers began realizing that if they were going to reach out successfully to the general public, they would have to make UTC easily understood by the layman. After all, listeners need to know what time it is if they’re to make sense out of station schedules.

But there’s also the question of what time it is in the country you’re listening to -- especially if you’re hearing a domestic service program. So UTC clocks have slowly been giving way to specialized devices that show not only UTC, but also the time in each of the various parts of the world.

You can purchase dedicated world clocks, made by Seiko and other manufacturers, at all kinds of stores. One, the large American-made Geochron, distributed by Ham Radio Outlet, even shows where the sun is shining throughout the world. These fancy timepieces can cost anywhere from around $30 to over $1,000 as in the case of the innovative Geochron. They usually work well and can be fun to use, but few adjust for summer, or daylight savings, time.

World Clocks Appear in Radios

Similar map-like clocks are starting to appear in world band radios, as well. Arguably the first among these was the Opal OP-36, which is also sold as the Siemens RK 702. You may recall in our earlier Monitoring Times test report on this model that it’s a great clock, but a dreadful radio.

West Germany’s Grundig has introduced something along the same lines: the Yacht Boy 230. Like the Opal, it has a map of the world from which you can choose the time in any area. Also like the Opal, the 230 doesn’t adjust for summer time. Unlike the Opal, though, the ‘230 is a reasonable, if uninspiring, performer.

Travel Model Has Wide Band Coverage

The 230 is compact -- about the size of the Sony ICF-7601 -- and so is well suited for traveling. It covers FM in stereo, no less, at least when stereo headphones are used; plus longwave, AM up to 1600 kHz, and the shortwave 120, 90, 75, 60, 49, 41, 31, 25, 22, 19, 13...and 11 meter bands.

That’s a lot of coverage for the globetrotter. About the only "holes" are below 9450 kHz shortwave and from 1600-1700 kHz in the AM band -- the forthcoming expanded upper end of that band in the Western Hemisphere.

It also has little touches that make it handy for the traveler. An alarm, for example, plus a timed-off setting and a dial light that fades out automatically in five seconds. However, its tuning is analog and there is no digital readout.

The ‘230’s performance, although perfectly acceptable, reflects the fact that it’s hard to manufacture a radio that sells for $150 -- the ‘230’s list price in the U.S. -- if it has a snazzy clock included. Something has to give, and in this case the axe fell hardest on shortwave performance.

Performance Only Adequate

The most obvious sign of this is that the radio uses single-conversion circuitry. This reduces production cost, which makes its relatively modest price tag possible. But it also results in all sorts of unwanted whistles, squeals and Morse-code images interfering with the station you’re trying to hear. The ‘230’s selectivity -- the ability to reject adjacent-channel signals -- is also mediocre.

Another small drawback is that the volume is controllable only by a pair of up/down slewing controls -- the sort you find on TV remote controls. In principle, there’s nothing wrong with this. But, again, cost cutting shows. The volume goes up and down in discrete increments that are pretty large, so the radio can be a bit louder or softer than you might like, and there’s nothing you can do about it.

Finally, there is some dial backlash at the low end of each band. It’s only an annoyance, but it’s also a problem that I haven’t encountered in many years -- something of a step backwards.
Niche Radio for The Compleat Traveler

It used to be that shortwave radios were thought of as a "niche market." Now, that market has grown to the point where there are a number of types of niche radios within that market.

The Grundig Yacht Boy 230 is one of these. For the traveler who wants an alarm clock, something to lull him to sleep, a radio he can tune in a dark hotel room, a clock to tell him not only world time but also the time in the next country he has to visit -- and also a radio that can keep him in touch with news and music from around the world, as well as from local stations -- all at a price that's reasonable and with FM stereo thrown in, the '230 fits the bill at less than half the cost of the better-performing Sony ICF-SW1S, which doesn't have the Grundig's flexible clock facilities.

You can hear Larry Magne's equipment reviews the first Saturday of each month, plus PASSPORT editors Don Jensen and Tony Jones the third Saturday, over Radio Canada's "SWL Digest."

**Magnavox D-2935**

"Best value"... Larry Magne

**Passport to World Band Radio 1989**

The Magnavox D-2935 offers tremendous value in the under $200 category. Passport to World Band Radio says, "... the best intersection of performance and price of any world band radio..." All the features you want are provided. Big LCD digital readout, dial light, gain control, S-meter, BFO for SSB/CW reception. Complete coverage of LW, MW, FM and shortwave is provided. Frequencies can be selected with a two-speed manual tuning knob, keypad entry or stored in nine memories. Large 4 inch speaker provides exceptional audio. Runs on 120/220 VAC or 6 x D cells and 3 x AA cells (optional).

Order #2214 Only $189.95 (+$5 UPS)

**Magnavox D-2999**

The Magnavox D-2999 is an attractive full featured portable with fidelity that will surprise you! Full digital readout (to 1 KHz), keypad entry, three-speed tuning, automatic search, BFO, bass & treble, 16 station memory, dial light, wide-narrow selectivity. Covers 150 - 26100 KHz plus FM. Requires 120/220 VAC or 6 x D and 3 x AA cells (optional)

Order #0958 $289.95 (+$5 UPS)
The Radio Shack

PRO-2024 Scanner

Newly released from Tandy is the Realistic PRO-2024 scanner, now available for $199.95 at Radio Shack stores nationwide. The low profile, woodgrain vinyl cabinet offers a backlit LCD display which confirms various functions entered from the keyboard (see illustration).

The 2024 operates from 120 VAC, 60 Hz line current only; no provision is made for 12 VDC mobile applications. A top hole allows attachment of a telescoping whip antenna; a rear-panel Motorola jack accommodates the installation of an outside antenna.

Frequency ranges are 30-54, 118-136, 144-174 and 380-512 MHz; 60 channels of memory allow recall from any combination of six ten-channel banks. Scan and search speed is a fast 25 channels per second, reducible to 13 channels per second if desired. A temporary "scratchpad" memory allows storage of up to six frequencies uncovered during the search sequence.

Sensitivity and selectivity are much better than the specifications state. Our lab tests showed squelch threshold averaging 0.25 microvolts on all ranges, while adjacent channel rejection is approximately 6 kHz at 6 dB down.

Audio is a powerful 1.2 watts, enough to blow you out of the room with the top-mounted speaker. At normal listening levels audio quality is clean, distorting somewhat at full output.

Although a front-panel headphone jack is provided, anti-blast protection built into the scanner reduces the audio substantially when an external speaker is connected to that port.

Keyboard-selectable functions include search, fast/slow scan and search speed, channel one priority, individual channel delay and individual channel lockout. Memory backup (no battery required) will preserve channel entries for up to one hour during a power failure. All channels resume scanning after about two seconds delay to await replies.

The instruction manual is quality printed and written in easy-to-understand terms, logically organized to introduce the newcomer to scanning and to the PRO-2024.

We were impressed by the price/performance of the new PRO-2024 and would recommend it for a basic, no-frills, desktop scanner where 800 MHz reception is not a consideration.

Autosearch/Store for the PRO2004/PRO2005

The Realistic PRO2004 wide-coverage scanner and its replacement, the PRO2005, have certainly captured the imagination of the monitoring public. With extremely wide frequency coverage and enormous memory capability, the scanners offer excellent performance at modest cost.

As originally designed, the 2004 and 2005 allow up to ten "scratchpad" search memories to be manually entered. That is, if an interesting frequency is uncovered while the unit is searching between two limits, the operator...
may enter that frequency into a separate bank of ten memory slots reserved for that function.

Key Research (Post Office Box 5054, Cary, NC 27511) has now released a tiny, easy-to-install module which automatically loads up to ten frequencies into memory as they are sequentially uncovered during the search process.

The inventor of the simple and useful accessory is Tom McKee who is one of the original inventors of scanning receivers, awarded a patent in 1964. His SS-45 module is only $24.95 postpaid in the U.S. and comes with an unconditional 90 day guarantee.

Let's Install One

Our favorite desktop scanner is the PRO2005; we were eager to try Tom's auto-store module and assigned the task to Sue, our service liaison specialist. She enjoys this kind of challenge and, with pliers in one hand and a soldering iron in the other, she was off!

The flat module is protected by a cardboard cover and measures about 2-1/2" x 3-1/2" square. We elected to place a couple of strips of double-sided adhesive tape to hold it in place once installed.

Tom's instructions are excellent and easy to follow. The only tools needed were a pencil-tip soldering iron with rosin core solder, needle-nose pliers, Phillips screwdriver and wire cutters.

Although the procedure is relatively simple and the directions are specific, we wouldn't recommend that someone unfamiliar with soldering or electronics attempt the job. If you solder about as well as I draw, you'd better get some help from someone who knows what he's doing!

Once the SS-45 was installed and the eight wires were securely in place, it was time to test our hardware -- and Tom's design. Following the directions, we turned the scanner on, entered our search limits, pressed the "V" (downward search) button and watched. Sure enough, every time the squelch broke, the scanner dutifully stored the frequency!

This is an excellent adjunct feature for the PRO2004 and PRO2005 and we highly recommend it for those invertebrate frequency hunters who are always looking for new listening targets. Next time those Air Force jets fly over here during their dogfight training, I know what button on my 2005 I'm going to push!
to keep an eye on the kids (interestingly, it looks like a Fisher-Price kid's toy in white and baby blue). But what makes this little gizmo really interesting is the price. The whole setup is just $149.00 plus $9.00 shipping.

To order, call 1-800-325-0800. If you're not on their mailing list, write them at 8200 Remmet Ave, Canoga Park, CA 91304.

Peace in the Family

From Benny's Express, a company that can also supply you with all the Garfield clip-on air fresheners you'll ever need, comes the Labtec infrared wireless stereo headphones.

Here's how it works. There's two parts. The first is a little transmitter that plugs into the output jack of your radio (or TV, stereo, whatever). The second part is a pair of headphones that have a little receiver built in so that you can wander around the house (within 30 feet, anyway) and listen to the radio without bothering anyone else.

The Labtec infrared wireless stereo headphones come complete with an AC power adapter and audio plugs for either stereo or mono. Just $39.99 plus $8.00 shipping and handling. Call 1-800-456-1700.

Radio Nostalgia

Suppose you've got a 1926 Sears Silvertone radio and it's just gone on the blink? What to do when you threw away the manual back in '27? Go to ARS.

ARS says that they can usually supply the diagram and data on any radio or TV manufactured from the early 1920s to the 1950s -- if you supply the make and model. How much? A very modest $3.00 plus handling.

For more details on this and other nostalgic radio goodies (like 6 pounds of electrical parts for $19.95) write to ARS at P.O. Box 997, Mercer Island, WA 98040.

More Nostalgia from K-Mart

Nostalgia. It's big business these days. Perhaps that's why K-Mart, that megolithic American retailer, now stocks "a complete assortment of nostalgic..."
from make some updates that look wood R5 stick radio," example of In Radiolette'.

The K-Mart version is a good looker with its realistic wood-grain cabinet. But don't look too close. Inside are some updates that would make grandad gasp for air.

Like FM to go along with the AM. And, yes, even a cassette player on which to listen to tapes of nostalgic radio programs.

Busted Antennas

Have you ever wanted to replace that bent or broken whip antenna but didn't know where to find a new one? Needed a fuse for the scanner? Coax switches? Speakers? Bulbs? A microfiche viewer? Batteries or other parts?

Look no further than the MCM Electronics catalogue. Every radio hobbyist should have one of these in his radio room, just for reference. Cover price is $2.00 and worth it.

Get yours by writing MCM Electronics, 650 Congress Park Dr., Centerville, Ohio 45459-4072.

RF Power

If power is your game then you'll want to get a copy of the new Bird Electronics Corporation's new catalogue of RF power measuring devices.

The catalogue includes hundreds of photos and features thousands of Bird Products ranging from their famous Bird Wattmeters to calorimeters, plug-in elements, line sections, QC-connectors, RF loads, directional couplers, switches and more.

OK. So it's not light reading for most of us. But for the qualified RF engineer, its 60 pages are highly desirable material. Get your copy by writing to the Bird Electronic Corp., 30303 Aurora Rd., Solon, OH 44139 or call 216-248-1200.

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MT
Learning to work with tuning diodes

A Monitoring Times reader recently asked me to write an article about tuning diodes and how to use them. Indeed, it is a subject that you should find interesting if you like to experiment with electronics circuits.

Tuning diodes are known by several names, some of which are trade names assigned by various manufacturers. You will hear them called VVC (voltage variable capacitance) diodes and varactor diodes. One manufacturer calls his product Epicap diodes. Generally, the diodes all serve the same purpose, irrespective of their names.

Perhaps you are wondering what advantages, if any, there are when using tuning diodes. The major justification associated with using these products is that they can replace the bulky, expensive, and hard-to-find mechanical tuning capacitors. Most tuning diodes are no larger than the familiar 1N914 silicon diode.

A tuning capacitor, on the other hand, may be two or three inches square, depending upon its maximum capacitance and plate spacing. The market has practically dried up in the USA with respect to newly manufactured small variable capacitors. The demand is no longer there for mechanical tuning capacitors since semiconductors replaced vacuum tubes.

How do VVCs Work?

Tuning diodes are active devices. That is, they require an operating voltage (variable) in order for us to cause a change in their junction capacitance. Passive devices need no operating voltage. An example of a passive component is a coil-capacitor filter network, such as those used in audio circuits.

Nearly all diodes can be used as VVC diodes. A 1N914, or a group of 1N914s in parallel, will provide a change in capacitance if the applied DC voltage is varied. The junctions of silicon transistors (2N3904, for example) will change capacitance as the operating voltage is varied. They work quite well as VVC diodes when connected as shown in Figure 1.

In all cases, a reverse bias voltage is applied to the semiconductor that is being used as a VVC diode. In other words, a positive voltage is applied to the diode cathode. The lower the applied voltage, the greater the diode junction capacitance.

Furthermore, there is a linear portion of the capacitance-change curve for a VVC diode. If we operate only over the linear part of the curve, we will have a relatively constant change in capacitance per each volt of bias change. At either end of the response curve it takes several volts to cause a minor change in junction capacitance. Figure 1 illustrates this phenomenon.

It is worth noting that VVC diodes are unlike mechanical tuning capacitors in another respect: minimum capacitance is normally quite high, even at the maximum permissible operating voltage. A typical small mechanical tuning capacitor might exhibit 5 pF of minimum capacitance, with a maximum of, say, 30 pF. An equivalent VVC diode might have a minimum capacitance of 20 pF and a maximum value of 40 pF.

Therefore, we need to design our circuits to conform to these capacitance limits. It is not difficult to do, once we know the diode characteristics. Data sheets that illustrate these characteristics are usually available from the product manufacturer.

What shortcomings might we expect when we use VVCs in an RF circuit? The primary area of concern lies with tunable oscillators. All semiconductor devices exhibit changes in junction capacitance as the operating voltage is varied and when changes in heat occur. A solid-state oscillator (JFET or bipolar transistor, alike) is subject to frequency drift until the device junction comes up to operating temperature. Short-term drift generally stops after approximately two or three minutes, or as soon as the device junction warms up and settles down.

Long-term drift (often lasting an hour or more) is most often caused by RF-current heating of the components associated with the oscillator. When we add one or more VVC diodes to an oscillator circuit, we must include the changes in junction capacitance (caused by heating) of the VVC diode. This adds to the short-term drift problem. The advantages associated with the use of tuning diodes generally outweighs the inconvenience of increased drift.

Tuning diodes come in various capacitance ranges. Some have sufficient capacitance to work well for tuning the circuits in a standard AM broadcast-band radio. Others have a low maximum capacitance, and they...
are ideal for VHF circuits. Each type of VVC diode has a Q rating, and this must be taken into account when designing a tuned circuit.

Specifically, you must make sure the diode Q (quality factor) is substantially higher than the desired Q of your tuned circuit. If not, the diode can degrade the Q of the overall circuit, which can result in poor performance. For example, if you design a tuned circuit to have a loaded Q of 15, make sure your VVC diode has a Q of five or ten times that value (or greater) at the operating frequency of the tuned circuit.

Tuning diodes are inexpensive. They are available from a number of electronics surplus dealers. Check your catalogs for these bargain-priced devices.

A Practical Circuit Example

Figure 3 shows how a pair of VVC diodes can be used in a tunable oscillator. The principle is the same when you use them to provide resonance in an RF or IF amplifier circuit. The back-to-back diode arrangement in Figure 3 is preferred when we use them in oscillators. A single diode is okay for RF amplifiers. If we use the back-to-back diodes in our oscillators, we provide a more linear waveform at the output of the oscillator. The reason for this is somewhat detailed, so I won't go into it here.

Notice that a regulated +9 volts is shown for the operating voltage of both the oscillator and the VVC diode. This prevents jumps in frequency if the primary voltage source suddenly changes. A standard potentiometer is used for the frequency control of the oscillator. Limiting resistors are seen at each end of R1. They prevent the VVC diode from operating in the nonlinear part of its curve.

A vernier drive may be used to turn the potentiometer for smoother tuning. A 10-turn Helipot and dial is an even better choice for making the diode tuning less critical. The oscillator drift can be reduced if you mount your VVC diodes on a small heat sink. Epoxy glue may be used to affix the diodes to the heat sink.

In Summary

I hope this article has given you a better understanding of how tuning diodes work. More importantly, I encourage you to experiment with tuned circuits that use VVC diodes. You can tack together a simple oscillator circuit for your tests in an hour or less!

1 VVC diodes in various capacitance ranges are available from Hosfelt Electronics, Inc., 2700 Sunset Boulevard, Steubenville, OH 43952. Call 800-524-6464 for ordering.
Readers’ Choice

Many people have written to express their delight with the modifications we presented on the ICOM R-7000 receiver.

Edward Faggart is a reader from Lincolnton, North Carolina, who uses one of these radios. And while he likes the extra 100 channels provided by the initial modification, he does raise some questions. For example, Ed asks “What good is the 100 channel mod if the scanning speed remains the same? Are there any increased scanning speed mods available for the R-7000?” How about a mod to provide additional scan delay settings instead of the stock 5 and 15 seconds?

“Any front end mods that will increase the sensitivity? (I would be very careful here as the possibility of decreasing the dynamic range and increasing intermod problems can occur if you start modifying the RF section of a receiver like the R-7000). Audio mods to lower distortion? Power supply mods to lower the heat generated by the PSU and increase surge protection?”

Ed also raises the question of realignment of the receiver to produce optimum performance. While the methods of RF and IF alignment are generally well known, they require some very specific test equipment and experience on the part of the technician doing the alignment. Several retail outlets (AEA, AES, and others) offer “optimized tuneups” for specific equipment. Check out the various retailers in the magazine ads for prices and availability.

Ed’s final question (what?) centers on a low resistance ground system. A good DC ground system is essential for both operator and equipment safety. In most cases a good ground system will reduce noise pick-up. This will benefit the AM listener. FM, by its very nature, tends to be less susceptible to noise pick-up than AM. Therefore, the noise reduction should not be noticeable on the FM mode.

A good source of ground braid is to strip out the shield of old discarded coaxial cable and use this as a low resistance conductor between the antenna mast, receiver, accessories, and several ground rods driven into the earth near the shack. Alpha-Delta makes some commercial grade lightning protectors for car. Buy them and use them. Sure they’re expensive, but so is that kilobuck you just plunked down for the R-7000.

Unfortunately, absolutely nothing will protect equipment from a direct lightning strike. All of these protective devices will only protect the equipment from nearby strikes and static discharges. If anyone has any word on Ed’s suggested mods for the R-7000, do share!!

- Roger Mundy, KO8C, of Milford, Michigan, writes to echo Ed’s plea for a scan speed modification. Roger (a USAF survivor) managed a tour in my old stumping ground around Lajes Field, The Azores, while assigned to the 1936CS. My Lajes tour was 1970/73 and I had a call licensed as CT2BH. For Roger and others, the DC-to-DC information is included below.

ICOM R-7000 Factory Updates:

1. Initialization Failure: If the unit does not power up when the switch is pressed or appears to be operational but no audio is heard, try turning the main tuning dial or repressing the power switch. If operation is restored, chances are that the integrated circuit (IC-3) needs to be replaced.

2. Mode Switch Failure: If pressing the mode switch keys (USB/LSB/FM/AM/CW) does not change the mode, chances are good that the crimp connections on the green jumper wire that goes from the side of the switch to the side of the logic board (labeled W148) are not making contact. Tighten the crimp to restore proper operation.

3. Display Fails to Operate at Power-Up: If the display does not come on when the radio is powered up, there is a good chance that the components on the DC-to-DC converter will need to be replaced (refer to original article on R-7000 mods in the July issue of Monitoring Times for the procedure).

If your radio is under warranty, ICOM America will do these mods for you. However, if your R-7000 is out of warranty, then contact ICOM America for prices (last time I checked, it was $45/hour, they will normally charge two hours labor plus parts) and you will pay the shipping both ways.

- Jeffrey Less of Toledo, Ohio, writes to comment on the tunable ground system outlined in the August issue of MT (The Terrigator tuneable ground system). Jeff wants to know if the Terrigator circuitry will improve his MW DX station.

While the Terrigator will tune a ground system at 80 meter (3.5-4.0 MHz) frequencies, additional inductance may have to be incorporated to get the unit to tune MW frequencies. One thing for sure, resonance will be very sharp.

About the only way to use this system with a receiver is to incorporate an antenna noise bridge (Palomar Engineers, Box 455, Escondido, California 92025). This device is placed between the receiver and the antenna (or in this case, the ground system) and tuned for minimum on the S-Meter. This represents a resonant condition. I really doubt that the hassle required to make this work with an AM receiver will be worth the effort.

4. SONY 2010 Department: Several readers have written to express their tale of woe regarding the Sony 2010’s nasty habit of blowing the first FET (Q-303) due to static, RF overload, etc.

Having owned a 2010 for nine months, and using it with several active antenna systems, including the AN-1, Datong AD-270 and the Inline Components AC-1 Micro-module, I concluded that the 2010 is not the receiver for me. I have heard horror stories from close DXing buddies and read others in various magazines attesting to the inability of Sony design engineers to come up with a bullet-proof RF front end circuit that won’t go "Tango Uniform" at the drop of a hat.

Unfortunately, the Sony 2010 is a classic example of "electronic inbreeding." Like its human and animal counterparts, the 2010 has its own form of recessive genes that manifest themselves in poor performance and costly repairs. That’s why I’m now using an old.
beat-up Sony 2001 (my third, actually) for my portable applications. I'll put up with the lack of selectivity and memories and horrendous battery drain, just for the peace of mind knowing that the 2001 won't easily shed its first RF amp.

* Joe Topinka, WA9LAE, writes to say that if you want a replacement for the Sony 2010 FET, Q-303, the ECG-312 will do the job. However, the leads are reversed (see attached diagram). Joe also cautions, "Be extremely careful of the ferrite antenna wires (all four of them) as they are very fragile."

* John Bryant, of Stillwater, Oklahoma, who some months ago lent his hand to an article in this magazine on Indonesian DXing, writes to express his sadness at the loss of the front end FET on his Sony 2010 when used with the Inline Components AC-1 Micromodule active antenna. John and I have had a couple of loooolllllong phone conversations regarding this problem.

As stated earlier, I used my 2010 with the AC-1 with no adverse effects at all. However, John managed to take out Q-303 on not one, but two, Sony 2010s! In talking with Wes Olson of Inline Components, 4521 Campus Drive, No. 113, Irvine, CA 92715, it has been concluded that the AC-1 Micromodule does, in fact, zap the RF front end on late production 2010s. The gain of the AC-1 makes up for any loss of sensitivity resulting from the demise of Q-303.

It becomes apparent that something is wrong only if you use the 2010 without the AC-1 on the Tropical Bands or MW. It becomes especially noticeable when a "healthy" 2010 is placed alongside and signal levels of the two receivers are compared. Word of CAUTION: be careful of what you plug into the external antenna socket of your 2010. Solution: quit buying Sony 2010s and force the Sony design staff to build a receiver worth the price they are charging.

* Finally, Craig Spilman of Sacramento, California, wants to know if there are any mods to the Uniden Bearcat 100XL scanner and if the default frequencies initially set into the scanner ROM are accessible (changeable) by some mod? Anyone out there have an answer? If so, send it to me for publication.

Once again, we are at the end of our rope. If you have anything to share with the readership, don't hesitate to write. Till next month, have a Merry Christmas, Happy and Safe New Year, and lots of good DX!!

Monitoring Times invites you to submit your favorite projects for publication. For more information, contact Rich Arland, P.O. Box 98, Brasstown, NC 28902.

MONITORING TIMES

December 1989 95
When Captain Kirk gives the command, "Beam me up, Scotty," Scotty responds by throwing the switch on a marvelous device which utilizes a beam antenna to send a signal containing matter through space. Of course, beamings humans through space is presently possible only in science fiction. But on the other hand, we do now have antennas which can "beam radio signals in" from specific directions.

The Nice Thing About Beams

A very nice thing about beam antennas is that most of them also have gain, which means increased sensitivity to the signals which you want to hear. So beam antennas are useful for weak signal work, and for communications with stations in specific directions from your location.

Another plus is that interference from all directions except the direction of the beam heading will be suppressed. And the beam described in this month's column is economical, light-weight, and easy to build.

This antenna's unique boomless construction is allowed by the use of a strong monofilament line which supports the "ultra-light" aluminum elements as shown in Figure 1. The monofilament is attached at its ends to whatever happens to be handy for holding the antenna elevated. Thus, the antenna can be mounted from hooks on the walls in a room or attic in a house. For temporary or portable use, it can also be used outside, hung between trees, towers, buildings, or whatever is handy.

If you want to mount this antenna outside on a long-term basis, substitute light aluminum tubing for the wire of the elements, and use light nylon or dacron rope in place of monofilament. I've made the antenna both ways (wire elements and tubing elements) and it works well.

So, if you'd like to monitor some of those weak elusive signals better, or concentrate on signals from a particular direction, or even to reduce interfering signals or noise from off-beam directions, then this month's Yagi-Uda beam may be just the thing for you!

Constructing the Antenna:

1. The beam's elements are made from eight gauge aluminum ground wire available from Radio Shack. The lengths of the elements for two different beams, with their respective band-centers at frequencies of 148 MHz (two-meter ham band) and at 153 MHz (utility band) are given in Figure 1.

Also given are formulas for finding lengths from elements for other bands if you wish. The formulas are easy to use. For instance, if you want a beam centered on 115 MHz, the table in Figure 1 says divide 444.6 by 115 MHz to get the length in feet (which is 3.87 feet, or about 3 feet 10-3/8 inches) for the reflector.

Each element for the beam consists of a single piece of wire, except for the driven element, which is made in two halves. Cut each half of the driven element to one-half the length shown for the driven element in Figure 1.

Take each half and flatten one end with a hammer for about an inch until the wire is about one and one-half times its initial width. Then two holes are drilled in the flattened portion, as shown in Figure 1B, to accommodate one-half inch long number three round-head machine screws.

2. The drilled ends of the element-halves are then bolted, with their ends separated by about 1/8 inch, to a 4-1/2 inch by 1/2 inch strip of fiberglass. The fiberglass can be salvaged from a printed circuit board which has been stripped of metal foil. Plastic is okay too.

Drill four holes in the fiberglass to accommodate four screws as shown in Figure 1. Bolt the element-halves to the strip, putting a lockwasher and then a nut on each.

3. Once the element-halves are bolted firmly in place, put two plain flat washers followed by another nut onto each of the two innermost screws. These two screws will be the terminals for connecting the feedline.

4. When the driven element is completed, cut the other elements to length (see Figure 1) and drill a hole for the monofilament support line in each end of each element, 15-1/2 inches from the element's center. These holes will be near the element's outer end (see Figure 1).

5. The monofilament line (I used 30 pound test) is then threaded through the

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**FIG 1. A 7-ELEMENT YAGI-UWA ANTENNA CAPABLE OF 12.7 DBI GAIN. THE TABLE GIVES ELEMENT LENGTHS AND SPACING.**

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www.americanradiohistory.com
elements, one at a time. Tie and knot the filament in place at each hole, so that the elements stay at the proper separations given in Figure 1.

6. Attach the center connector of a 75-ohm coaxial cable to either of the screw terminals on the driven element, and connect the shielded braid of the cable to the other screw terminal (see Figure 1). Although no balun is used, the system performs well.

7. Mount the antenna so that the elements are vertical, and attach the lead-in cable to your rig. The antenna is then ready to use.

Using the Beam

Best-practice tradition has it that the feedline should come away from the vertical driven element at right angles (horizontally). I find, however, that the antenna still works fine with the feedline hanging limply near the driven element. Another rule is that generally, the higher you mount the antenna, the better it will perform.

If you’ve never used a beam antenna before, the gain of this skywire may surprise you. Using my HT (1 watt power output) with nonbeam antennas, I usually have trouble working into my favorite repeater in a city about 40 miles away. Using this beam, I get reports which say that my signal sounds like a local mobile rig (95 percent quieting). And I still get decent reports (50 percent quieting) when I cut the power from 1 watt to 1/4 watt. For the little effort and expense involved, this is quite an antenna.

RADIO RIDDLES

Last month: I asked you why the early radio pioneers, like Marconi, first developed the less useful longer waves and ignored the more useful short waves (HG), very short waves (VHF), and ultra short waves (UHF) for so many decades. Well, it was all coincidental to Marconi discovering the grounded quarterwave vertical antenna, the dominant antenna design of his early work.

The longer (taller) he made his vertical antenna, the farther he could communicate. The most important reason for this was that the longer the antenna, the lower the frequency the old spark-coil transmitters would radiate. In those days the only tuned circuit in the transmitter was often the antenna itself! The longer waves thus produced tend to travel well along the surface of the earth, and therefore will extend beyond the line-of-sight limitations of the shorter wavelength bands.

So longer, taller antennas, producing their longer wavelengths, accidentally led radio pioneers, who were seeking to cover greater distances, to avoid short waves and microwaves for a long time. I feel sure that those early radio pioneers would be quite pleased today, if they could just hear our long-distance ionospheric-skip shortwave communication and the long-distance microwave links now possible via communication satellite!

This month: The antenna described above is properly referred to as a “Yagi-Uda” antenna. Often, it is mistakenly called simply a “Yagi.” Why is this a mistake? Would it be okay, or even more proper, to call it a “Uda?”

Find the answer to this month’s riddle, and much more, next month in your copy of Monitoring Times. Till then, Happy Holidays, Peace, DX, and 73.

CHECK YOUR LABEL

If there is no date next to your name, or if it has expired, THIS IS A SAMPLE ISSUE OF MONITORING TIMES; To keep it coming, send in your subscription today!

MONITORING TIMES

December 1989 97
Q. Can you tell me why my NRD525 will suddenly cut off in the middle of a program, then come on again? I don't use the timer. (George Snyder, Torrance, CA)

A. This question often comes in from Kenwood users as well. Although it is remotely possible that the microprocessor or power supply is defective, it is more likely that the squelch control knob has been set above its fully-off position. Check that first.

If the condition persists, and AGC and RF gain controls are normal, you might have a problem. In the NRD525, there was a short period of time when an erratic line cord connection caused the entire receiver to shut down unpredictably. This was easily corrected by replacing a component under warranty repair.

Q. My Yaesu FRG9600 has 100 memory channels, but only 10 can be scanned at any one time. Is there any modification which will allow all 100 channels to be scanned? (Steve Pinto, Philadelphia, PA)

A. None that we have ever heard of.

Q. My R2000 receiver reads slightly high in the upper sideband (USB) mode; LSB and AM seem to be right on frequency. Why is this and what can be done? (John Richardson, Titusville, FL)

A. Modern communications receivers have (at least) two oscillators: the local oscillator for main tuning and the product detector oscillator for SSB/CW modes. Some manufacturers deliberately make the USB 1.5 kHz high and LSB 1.5 kHz low to match the offset of the audio energy of the sideband. Others let well enough alone and the display will read the original center carrier (“window”) frequency, regardless of which sideband is chosen (preferred by most).

First, use a frequency counter to be sure that the local oscillator frequency is exact; then SSN alignment is simple. Tune in WWV at 10.000 or 15.000 MHz and select either USB or LSB mode. Locate the two trimmer capacitors in the product and carefully adjust each trimmer in the proper mode (USB or LSB) for zero-beat on WWV (whistle tone gets lower in pitch until it disappears and the signal sounds normal). Switch back and forth between AM, LSB and USB to be sure they all sound the same on the WWV tone.

Q. My new scanner antenna hasn't helped reception; in fact, there is more noise and the radio hangs up on quiet channels. What gives? (Donnie Blackwell, Charlotte, NC)

A. Scanners have a distinct range of signal levels they can endure without adverse effects; you have exceeded your scanner's dynamic range by using a better antenna!

The results of front-end overloading include desensitization (signals appear weaker than before), image reception (the same signals are heard 214.2-21.6 MHz higher or lower), and intermodulation (mixed combinations of voices and services are heard on many frequencies).

Some of these signal products may not have modulation on them, or may have modulation different from what the scanner is set for (AM signals received when the scanner is set for FM mode and vice versa), accounting for the scanner's hanging up on "quiet" channels.

Q. Modern receivers have digital tuning -- pushbutton frequency entry. So why do they still have tuning knobs? (Joseph Johnson, Savannah, GA)

A. Listeners like to command their radios manually for fine tuning or signal searching. It is both psychologically satisfying to know that you are still in charge of your radio in these days of automation, as well as good engineering.

Q. What is the best antenna to use for mobile shortwave listening with my portable shortwave radio? (Steve Eschner, Lima, OH)

A. The farther from the engine compartment, and the longer, the better. Be sure to use a good grade of coax for shielding. The worst problem mobile SWLs encounter is electrical ignition noise, from their own cars as well as from others.

If the machine-gun rat-a-tat ignition noise persists, switch to resistor spark plugs; you will not suffer any reduction in engine performance. If resistor spark plugs don't solve the problem, more extensive shielding, filtering and bypassing, not within the scope of this column, will be required.

Q. What frequencies are used by the Canadian flying team, the Snowbirds? (Paul Neary, St. John's, Newfoundland)

A. The last set of frequencies sent in by a Canadian reader showed 20 channels (in order): 275.8, 295.6, 310.8, 227.6, 243.4, 240.5, 378.5, 266.3, 294.5, 322.8, 316.5, 344.5, 356.6, 236.6, 283.9, 266.3, 294.5, 322.8, 316.5, 344.5, 356.6, 236.6, 283.9, 363.8, 289.4, 245.0 and 239.8 MHz AM.

Q. My 'Best of MT 1985' is getting rather dog-eared from use. Will there be another useful anthology of questions, answers and hints for the listener? (Jim Ellis, Vero Beach, FL)

A. By the time you read this, my newest book, entitled, "Bob Grove's Scanner and Shortwave Answer Book," should be available from Grove Enterprises and other dealers of monitoring supplies.

Q. On an old receiver I see a switch marked "AVC" and "MVC." What do these mean? (Kevin Neal, Flippin, AR)

A. They mean "automatic volume control" and "manual volume control," respectively. AVC automatically compensates for wide differences in received signal strengths to accommodate the weakest signals, yet prevent the receiver from overloading or "blasting" on strong signals. MVC requires the operator to adjust the sensitivity (or RF gain) control to compensate for the differences.

Strictly speaking, this level-compensat-
ing circuitry doesn’t really adjust the volume (audio); it varies the gain (sensitivity) of the signal amplification stages. For this reason, manufacturers prefer to call AVC “AGC.”

Q. Are there any companies who specialize in upgrading shortwave receivers like my Kenwood R2000? (William Kiely, Co. Cork, Ireland)

A. Yes, indeed there are, although shipping would be expensive for Europeans. Send an IRC for a reply from International Radio and Computers, 751 South Macedo Blvd., Port St. Lucie, FL 34983; Universal Shortwave Radio, 1280 Aida Dr., Reynoldsburg, OH 43068; Electronic Equipment Bank, 137 Church St., N.W., Vienna, VA 22180; and Radio West, 850 Ann’s Way Dr., Vista, CA 92083.

Q. I have an extension speaker on my communications speaker with a separate volume control attached to it. Will this hurt the receiver in any way? (George Mayberry, Rantoul, IL)

A. Probably not at the low power levels that you are likely to be running. To be safe, however, it would be better to use a low-resistance control which will prevent high audio voltages to build up on the output transistors because of impedance mismatch.

Try a common “fader” control used for automotive rear-seat speaker balancing (Radio Shack 270-046), or even a cheap rheostat (Radio Shack 271-265).

Another disadvantage to using carbon volume controls like you presently have is that they are rated at about 1/4 watt; over a period of time, overheating degrades the carbon coating and results in excessive noise or erratic sound levels at various settings.

**American Heart Association**

Bob Grove’s Scanner and Shortwave Answer Book is available for $12.95 plus $2 from Grove Enterprises.
R. George Newton, a dentist in Skaneateles, New York, writes to say that he finds the Advance Technologies' advertisement "tacky."

"In my opinion," says Dr. Newton, "it's in poor taste. Teflon bullets! Hand Grenades!"

I've never seen the book; however, I defer to Bob Grove's review in last month's issue (November, p. 37). In it, he calls The Spook Book "articulate and nonpolitical. It is objective, well-paced and informative. Rather than sinister and inflammatory, it is educational and urbane."

Not to worry, Doctor. We're not going to start pandering to the blood and guts crowd. Heck, I don't think we've run even one cover photo in which the models are dressed in camouflage and greasepaint.

"You want to make Monitoring Times better?" asks M. H. Schneider of Montchanin, Delaware. "Make it thicker by about ten pages and bring it to us weekly!"

We showed your letter around the editorial and production offices a couple of minutes ago. If you listen quietly, you can still hear the hysterical sobbing coming from down the hall....

Do you remember the name Tony Goldish? Late last summer, Tony wrote in to say that he was trying to get his ham license but was a bit discouraged because none of the local hams would lend him a hand. "Is it too much to expect a ham to let me come to his shack and watch him operate for a night?" concluded Tony's plea. We heard from Tony again and he still remains discouraged about his prospects of getting a ham license.

Well, there is now an answer for people like Tony and it involves three of ham radio's heavy hitters: Radio Shack, the American Radio Relay League (ARRL) and Gordon West. According to West, you can now get the name, address and phone number of a helping ham at your local Radio Shack store. The computer-ized listing, which is available at no charge, "allows a Novice candidate to find local assistance or a local testing team right around the corner." Now that's a great idea.

We had another great idea. We rang up Gordon West and told him of Tony's plight. And he quickly agreed to send Tony a copy of the excellent "Gordon West 21 Day Novice Course," complete with book, code cassette and all materials necessary to get your ham license. You can pick up your own copy of the 21 Day Novice Course for $19.95 from your local Radio Shack or ham store.

Vince Migliore of Petaluma, California, writes to pass along a clipping from the Pacific Sun. Entitled, "Eavesdroppers Listen Up..." the article says that you don't even need a radio to tune in cellular phone calls.

"Just set one TV on top of the other and connect separate antennas to the UHF terminals and turn them on. Tune one of them to somewhere around channel 75 to 83 (with the sound off) and then tune the other one (with the sound on) around the same channel range and listen until you hear a conversation. You may have to fool around a bit," cautions the article, "but it usually works." Now how about that!

Ivan Leech and his wife have been out sailing their 37 foot sloop, presumably around Puget Sound, since they live in Seattle, Washington, home. Well, to make a long story short, one foggy night when Ivan was on the foredeck watch with his 49 MHz transceiver, he heard... a baby.

"We were near the shore," relates Ivan, "so we figure that the transmission must have been from a wireless room monitor in a house on the shore."

The idea intrigues Ivan. "One of these evenings I'll take the transceivers for a walk in the neighborhood and see what I can hear. By the way, I thoroughly enjoy Monitoring Times and look forward to its arrival."

Speaking of eavesdropping, did you see the October issue of Consumer Reports? In an article rating cordless phones, they caution readers that "Lamentably, an article earlier this year in a shortwave magazine called Monitoring Times encouraged owners of FM scanners to do just that [tune in cordless calls] and instructed such 'cordless enthusiasts' on tuning and antenna construction. We are bad sometimes.

We got a copy of the Northeast Indiana UHF Associates newsletter from editor Jack D. Forbing, K9LSB. Jack, a very active ham (who even does a little utility monitoring from time to time), puts out a fine little sheet full of local news and information. If you're in the northeast Indiana area and want to find out more about NIUA, drop Jack a note at 1416 Lakewood Drive, Fort Wayne, Indiana 46819-1330. A self-addressed, stamped envelope would help defray the group's cost.
Juan Illa, KFL4CD, of Miami, Florida, poses with his impressive radio room. His radio equipment includes a Yaesu FRG-8800, Drake SRR-1, Regency digital Flight Scanner, Lafayette HA-52A and HL-80, TMC GPR-91, Ross RE-8000, and Heathkit GR-98, with antennas and accessories from Palomar, Grove, Dressler, and others.

If you have a picture of you and your shack, send a copy on to us. We enjoy bragging on our readers, too! Send to Monitoring Post, P.O. Box 98, Brasstown, NC 28902.

James Gehrer of Northampton, Massachusetts says that "it's fun to read reviews of multi-thousand dollar fantasy radios, but for the rest of us here in the real world, how about a review of the Sangean ATS-808? Here's a radio that seems to combine the features (like wide and narrow filters) and specs of the Sangean ATS 803A with the chassis size of the Panasonic RFB-65. What's going to be more interesting to people, the $6,000 or the $200 portable?"

We plan to review the Sangean ATS-808 but according to equipment guru Larry Magne, the '808 is still not out. Look for it -- possibly -- this spring.

"I have sent letters to HCJB in Quito, Ecuador, and over ten dollars in return postage. All I want from them is a new schedule. But I never get an answer. Has anyone else complained about these folk?" That letter comes from Alfred Fossum of Fall River, Massachusetts.

From time to time, HCJB has trouble with mail going to Ecuador. The trouble is that someone steals it. Now, I'm sure HCJB would expect us to be Christian about this, but I suspect that people at the post office rifle the mail for cash and stamps, which they use to supplement their meager government salaries.

There's a good point for DXers who send reception reports as well. When mailing a letter to a Third World country, avoid using decorative commemorative postage stamps on the envelope. Seems that some postal employees make a living by ripping the stamps from the envelopes and selling them to collectors. Your letter, of course, is thrown away. In the case of HCJB, this kind of trouble can be avoided by using the station's U.S. address: Box 55300, Opa Locka, Florida 33055-0401.
**STOCK EXCHANGE**

Ads for Stock Exchange must be received 45 days prior to the publication date.

NON-COMMERCIAL SUBSCRIBER RATES: $0.25 per word - Subscribers only. All ads must be paid in advance to Monitoring Times. All merchandise must be personal and radio-related.

COMMERCIAL RATES: $1.00 per word payable with ad

1-3/4 SQUARE DISPLAY AD: $35 per issue, payable in advance.

*Monitoring Times assumes no responsibility for misrepresented merchandise.*

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**INDEX OF ADVERTISERS**

ACE Communications 89  
Advanced Electronic Technologies 43  
AF Systems 19  
Antenna Supermarket 97  
Antennas West 25,46,51  
Antique Radio 51  
Bob's Publications 95  
Capri Electronics 53  
Communications Electronics 17  
CQ Communications 91  
Datacom  Cover III  
Datametrics 87  
Data RX 33  
DX Computing 59  
DX Radio Supply 33  
Electronic Equipment Bank 9,55  
Franklin-Belle Publishers 67  
Galaxy Electronics 37  
Gilfer Shortwave 39  
GRE America 35  
Grove Enterprises 21  
Ham Radio magazine 45  
ICOM America  Cover IV  
Intercept Inc. 99  
Int'l Broadcasting Service 13  
Jabo 11  
Klingenuffs Publications 41  
MilSpecCommunications 101  
Monitoring Times  
Naval Electronics 5  
OPTOelectronics  Cover II  
Palomar Engineering 11  
Solid State Electronics 89  
Somerset Electronics 99  
Spec-Com Journal 89  
Systems & Software 93  
TEP Inc 95  
Universal SW Radio 7,87

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ICOM 751 HF transceiver, general coverage receiver with P.S.30 system supply and SM-10 mic. All mint used twice - $1000 firm. PRO 2004 new in box with 800 MHz mod - $300. [603] 529-1957.

**WANTED:** PRO 2004 scanners in good condition or REGENCY MX 7000's. Interested in contacting fire department listeners in California, Nevada, and Arizona as well as forestry listeners. Please contact Robb at [800] 228-3550.

**WANTED:** INFO-TECH M-800. Call [805] 659-4129 or write John Gardner, 10990 Del Norte St. #11, Ventura, California 93004.

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*ANARC GUIDE TO US MONITORING LAWS*: The texts of state scanner laws and the ECPA, with concise interpretations by Frank Terranella. $7.50 postpaid from ANARC Publications, 1218 Huntington Road, San Marcos, CA 92069.

For Sale: REGENCY HX-1000 portable scanner, excellent condition. Includes all accessories, rapid charger, BEE holster - $175 O.B.O. for everything. Spare battery pack also.

For Sale: MOTOROLA: MOTOROLA HT-210 high band portable. 2 channel, 5 watt, DTMF pad, new battery and rapid charger. Excellent condition. Freqs 154.725 and 155.250 installed. $400 O.B.O.


For Sale: REGENCY C-403 4 channel Hi/Lo/UHF scanner. AC unit, excellent condition - $45 O.B.O.

Curtis Harbin, P.O. Box 5576 EKS, Johnson City, TN 37603-5576. All units shipped UPS. Money orders preferred.

**GRUNDIG SATELLIT 400** with accessory GRUNDIG stereo cassette tape recorder. Excellent condition - $300, shipping included. Lawrence Spinak, evenings [508] 840-1598. P.O.Box 845, Leominster, MA 01453.

Wanted: C-64 program and info for controlling FRG-8800 with FIF 232C interface. Willing to pay. R.S., RR 2 Box 384, Carterville, IL 62918.

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