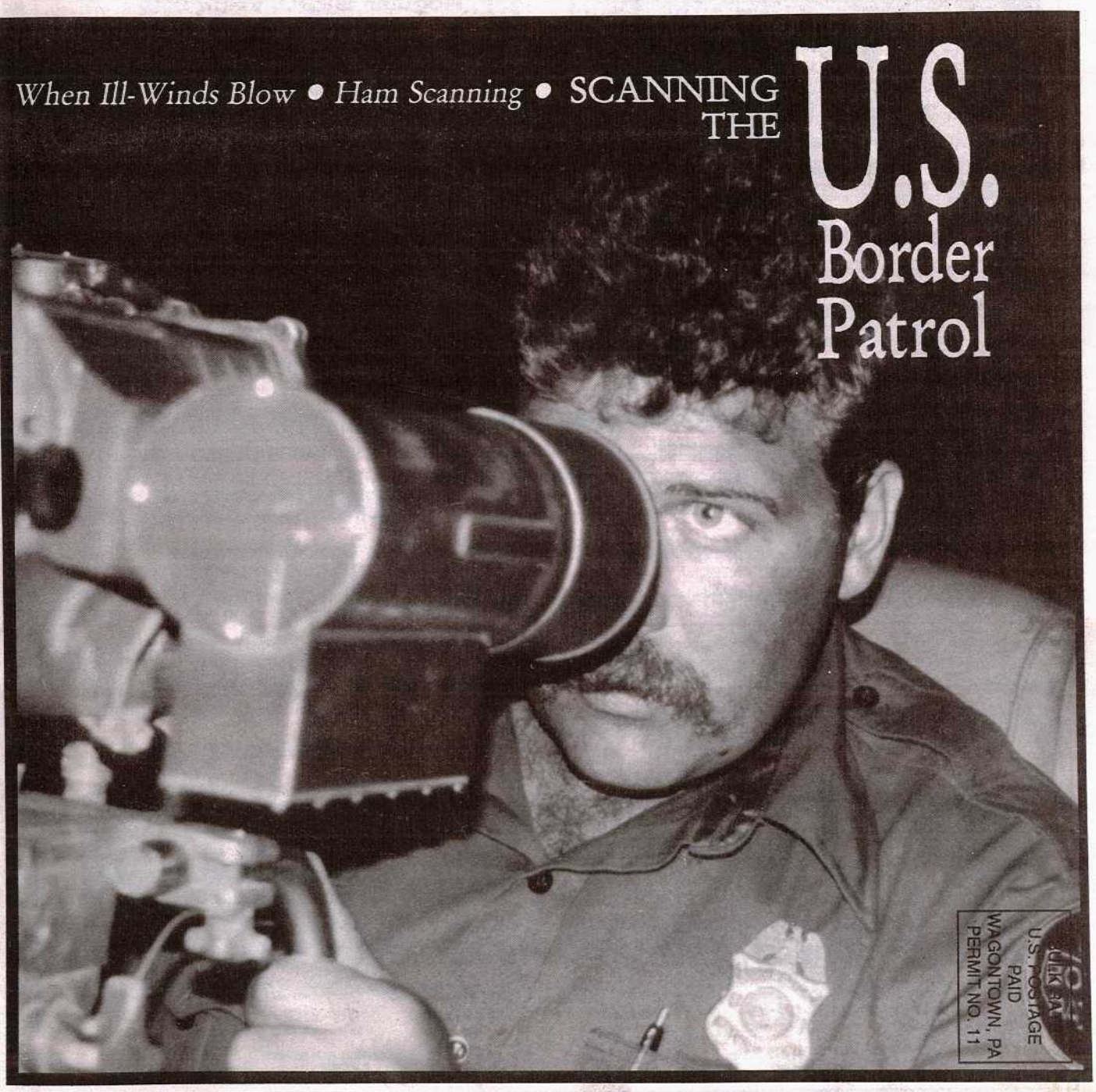
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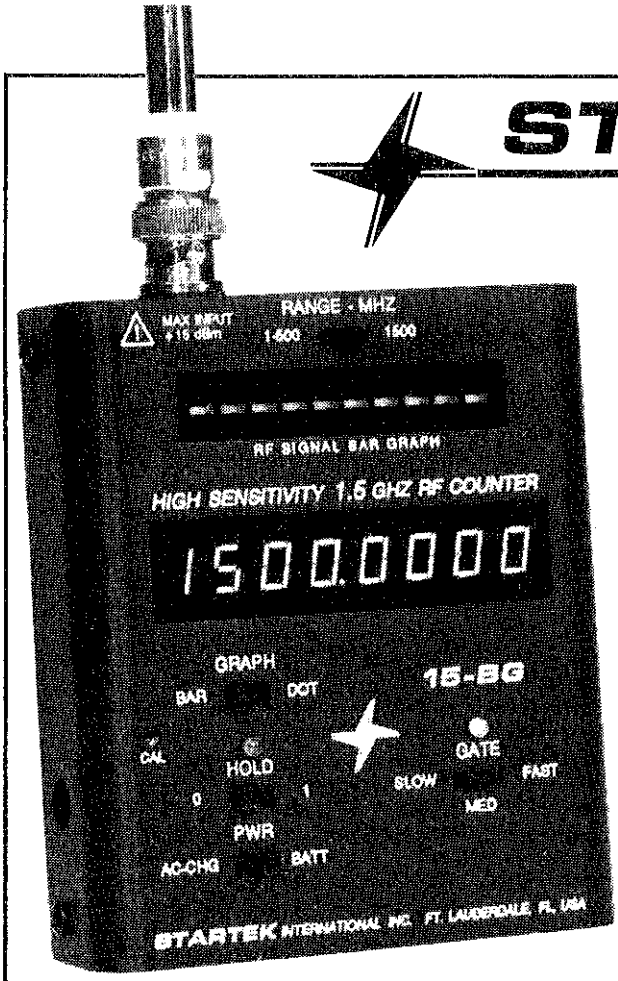
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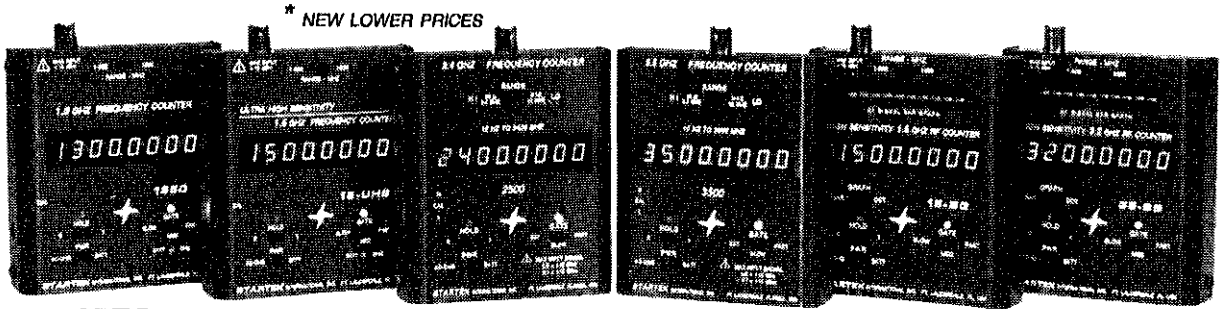
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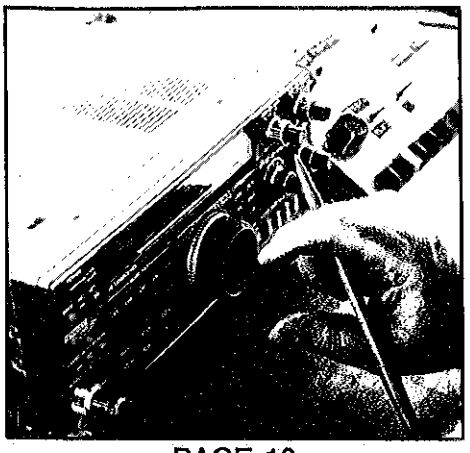
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NATIONAL
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National Scanning Report
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National Scanning Report
is the official publication of the
Bearcat Radio Club.
Subscription & Membership,
Box 291918, Kettering, OH 45429

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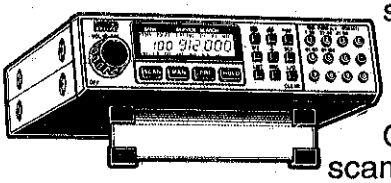
48 Things That Work
The Tone/Code Finder searches out CTCSS tone frequencies.

Cover photo: Border Patrol Agent, Mike Toms, scopes out illegals.

R & L Electronics

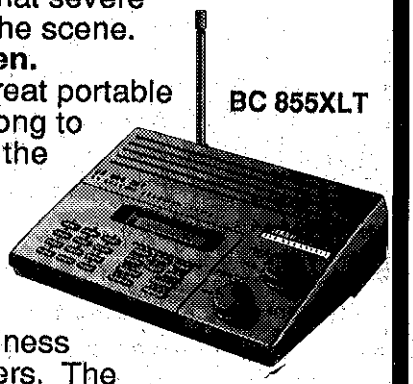
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BC 855XLT



BC 200XLT

Want a full featured scanner that won't dent your budget? The Bearcat **147 XLT** is for you. 10 band coverage and 16 channels of scanning excitement at a low price that any monitoring enthusiast won't be able to pass up. Or try the **147 XLT's** little brother, the Bearcat **142 XL** featuring the same ten band coverage and up to 10 channels for programming the local action frequencies, including instant weather.

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First Word

Radio in Action Radio In Action Radio in Action

Scanner Monitor Saves Family

Lt. Thomas W. Mitchell of the Sarasota Springs, New York, Police Department knows the value of an alert scanner listener. According to the Lieutenant: "A radio enthusiast was listening to his scanner and picked up a cordless telephone conversation...that led him to believe a crime was going to take place. The scanner listener taped what he heard and from that information we were able to determine where and when the crime was going to be."

Police staked out a residence after listening to the tape and observed Thomas H. Mitchell about to enter the back door. Not far away were found gasoline containers with wicks, Sterno cooking fuel, lighter fluid and gasoline-whetted rags...all the makings of arson. Local newspaper reports say that Mitchell and a friend were angry with a family in the building who had been making too much noise. "This would have been a terrible, terrible tragedy if we didn't find out about it," reported Lt. Mitchell of SSPD. "If the scanner listener didn't call in as a good citizen, we would have been there with bodybags."

Burger, Fries and a Heart Attack

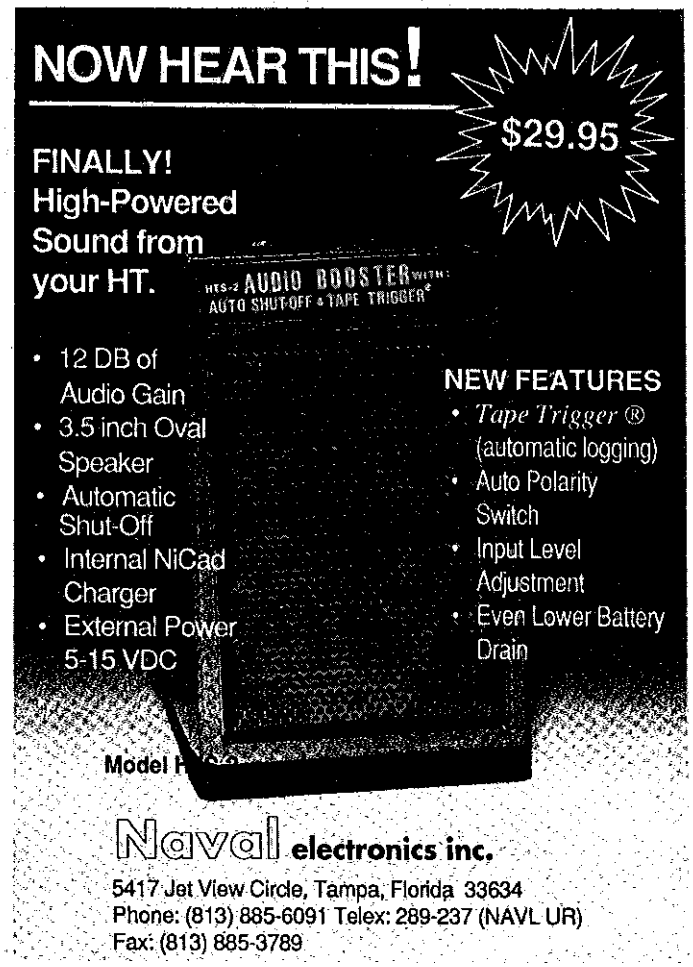
The same technology that allowed scanner listeners to eavesdrop on their local fast food restaurants and hear people say, "I'll have a burger, large fries and a chocolate shake," will now allow them to hear, "Mr. Miller is in cardiac arrest."

Nurses at two hospitals are testing headset-microphone combinations that will allow them to bypass noisy intercom systems and go directly to the patient. Right now, the system is in use at Rush-Presbyterian-St.Luke's Medical Center in Chicago and a Rush and Ochsner Foundation Hospital in New Orleans. It is suspected that traditional fast-food frequenies will be in use.

Would You Die for Your Scanner?

When a Hyattsville, Maryland, scanner listener decided to take advantage of the local police department's "ride along" program, he got a surprise he hadn't expected. While riding in the patrol car, the man happened to mention that he enjoyed listening to police communications on his scanner. According to a police spokesman, Officer Lawrence Latham then asked the man if he would give up his scanners if there was a "gun to his head." Latham then reportedly placed the barrel of his 9mm pistol to the man's temple.

There's no record of how the scanner listener responded, however, Officer Latham received a 3 day suspension for the incident. At least one other officer has called for his firing.



Radio in Action Radio In Action Radio in Action

Massaging the Scanner

Recently retired Sacramento Police Department Lt. James A. Rodenbaugh, 52, is reportedly being investigated on charges that he installed and programmed a "scanning device" and what might be a frequency counter at a massage parlor. The scanner, says the Sacramento Bee, would alert "the massage parlor's management to the presence of undercover officers wearing wires (microphones)." During a police search of the Tokyo Hot Springs Parlor, four of the former-Lieutenant's business cards were found.

Sacramento Police Chief Jerry V. Finney stated that investigators have "no proof that any officers" installed a scanner at the parlor.

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Denver Police and Local Media End Feud

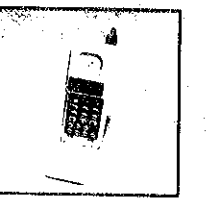
When the Denver police and fire departments upgraded to a $10 million trunked 800 MHz radio system, the media was up in arms. Seems that reporters, who rely on police scanners for "tips" on breaking stories, could not monitor the system.

After three years of negotiations, media and public safety agencies came to a unique agreement: news outlets will be allowed to purchase radios from the city which will be maintained by the police. Officers will, however, have the ability to turn off the radios in the case of sensitive broadcasts or stolen equipment.

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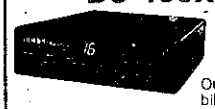
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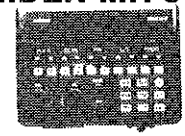


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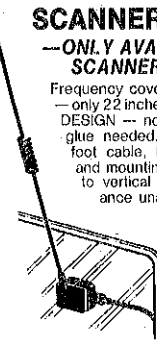
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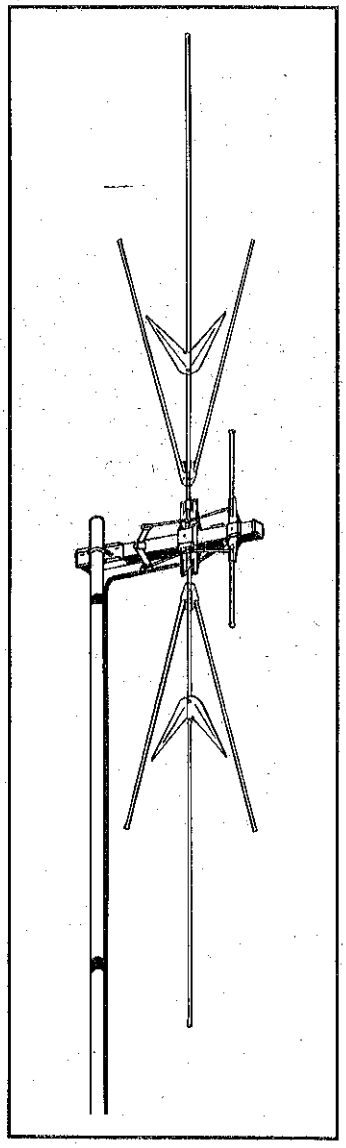
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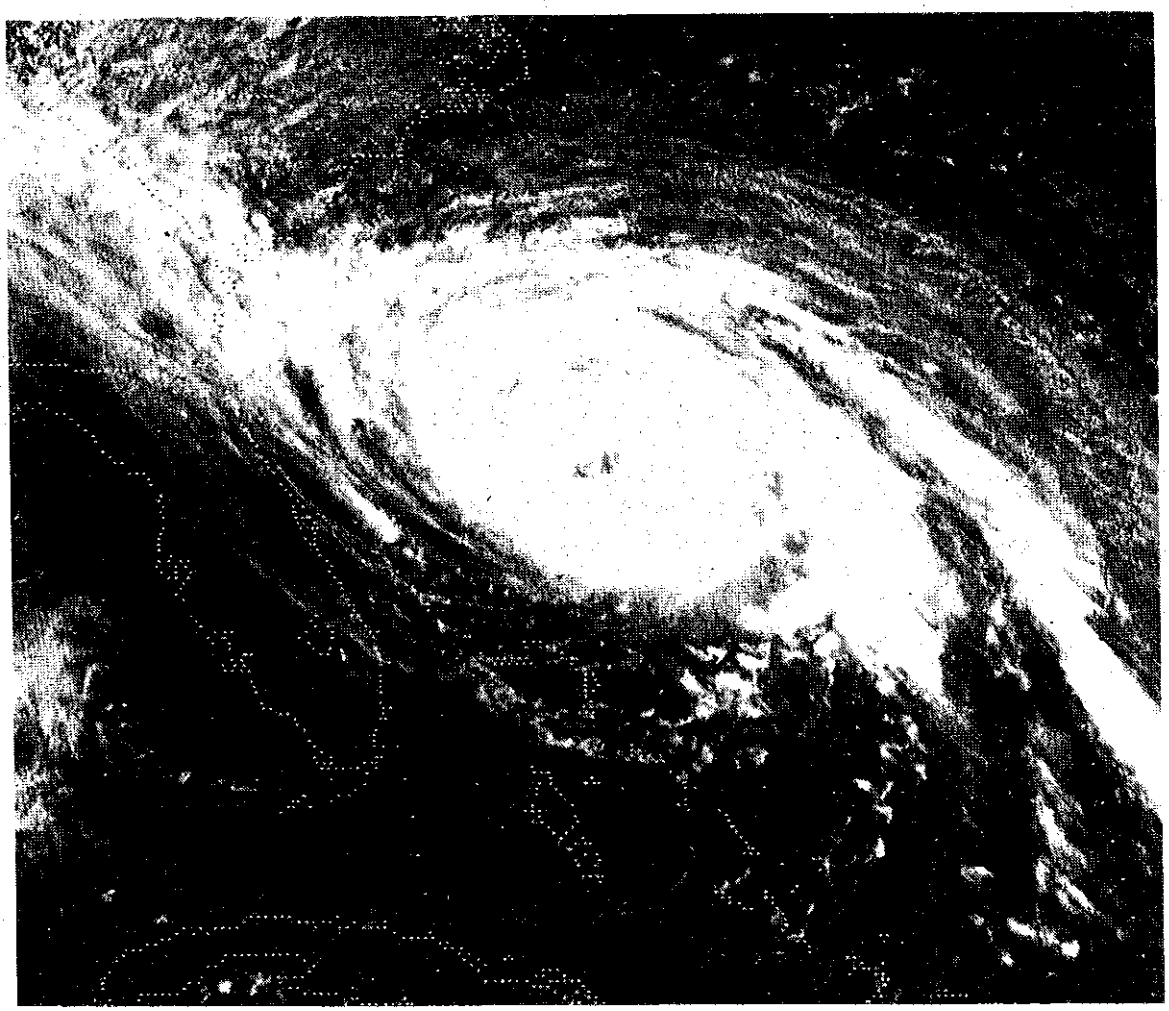
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Please bill my bank card. My MC or VISA number is:

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Signature ----------

When Ill-Winds Blow



BY EVERETT L SLOSMAN

In New England, along the East Coast, and in the Gulf of Mexico, it's an every summer ritual. Local TV weather personalities call for hot, hazy, and humid. Then, they explain that a Bermuda High has begun to affect the forecast.

But, when talk reaches tropical depression, it's time to check the scanner, charge some extra battery packs, and program in hurricane frequency lists.

These wind machines kick the Caribbean, slam into the continental USA, and devastate coastal property causing multi-millions in damage.

Hurricanes are not an East Coast specialty. Tropical

storms move in a westerly direction, so they can rip into Hawaii, hit southern California, or whip over Central America and reform in the Pacific.

West of 180 degrees longitude, the International Dateline, hurricanes become typhoons; in the Indian Ocean, cyclones; and in the Tasman Sea, willywillies. But, whatever they're called, that distinctive counter-clockwise pattern on a weather map signals one of the most destructive natural forces on earth.

Several elements help spawn a hurricane. They begin in eighty degree temperatures where the ocean is at least 200 feet deep. The winds must be coming from opposite directions over this water.

The brewing storm needs a column of unstable humid air rising at least 18,000 feet, more converging winds, and a high pressure area in the upper atmosphere to turn the mixture into a moisture pump.

The result is a collection of thunderstorms banded together that releases, over several days and millions of square miles, the energy equivalent of several nuclear bombs.

Every hurricane season scientists, meteorologist, and air crews fly into this maelstorm tracking speed, direction, and the forces of nature from a very up close and extremely personal vantage point. It's like a runaway roller-coaster combined with Niagara Falls.

Since 1976, an Air Force unit, know as the "Storm Trackers", has been flying these weather sorties. At one-time, their image was overshadowed by the "Hurricane Hunters". However, since that unit, the 53rd Weather Reconnaissance Squadron, was deactivated "Storm Trackers" have the exclusive territory sewn up.



Flagships of the NOAA aircraft fleet, the PC-3's are among the most advanced airborne environmental research platforms flying today.

Officially designated the 815th Weather Flight and the 34th Air Weather Flight, they help make up Keesler Air Force (Biloxi, MS) Base's 403rd Airlift Wing. Their ship is a WC-130, a weather-retrofitted version of the C-130 Hercules. With a crew of six, pilot, co-pilot, flight engineer, navigator, aerial reconnaissance weather officer, and dropsonde system operator, they penetrate tropical storms transmitting real-time weather data every minute to the National Hurricane Center at Coral Gables, FL.

Capable of up to 18 hours in the air, these aircraft fly the Atlantic, Caribbean, Gulf of Mexico, and a limited area in

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the Pacific.

During a mission they deploy Omega Dropsonde Windfing Systems, metal cylinders containing meteological instruments and a VHF transmitter linked to the WC-130's flight deck. Dropsondes are typically released from an altitude of 19,000 feet, falling at a rate of 5000 feet per minute.

In four minutes, the dropsonde operator can produce a vertical profile of that point in the storm. Coupling readings from several drops, the National Hurricane Center produces an accurate telemetry portrait.

The Storm Trackers flew over 300 hours in 1989 and over 225 hours during 1990, penetrating the eyes of the hurricanes 90 times in that two year period.

The National Oceanic and Atmospheric Administration has their own mini-Air Force at NOAA Aircraft Operations Center, Miami, FL. They use the WP-3D Orion, a four turboprop engine plane about the size of a Boeing commercial 737, and have two of them loaded with automated weather instruments.

There is a normal flight crew plus up to 12 scientists aboard these flights. Data is correlated with the plane's own navigation systems and transmitted via satellite to the National Hurricane Center.

Each year, the "P-3"s fly an estimate 400 hours each obtaining information on hurricanes, ocean currents, and the structures of severe storms. They also observe arctic ice

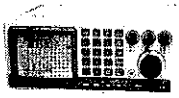
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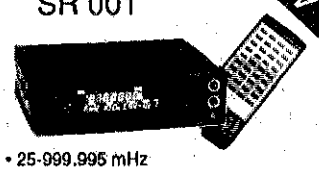
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development, test new weather instruments, and fly other scientific missions.

Like the Storm Tracker, P-3 data goes to Coral Gable, FL and the National Hurricane Center. This is where the forecasting action seen on tv takes place. When tropical depressions upgrade to storms the Center holds scheduled news conferences and provides official hurricane information. Neil Frank, now retired, and Robert Sheets, the center's present director, became American folk icons because of these live reports. Each has projected a self-effacing, gee-whiz image. Nothing academic or threatening about their presentations ...just your average hometown hurricane reporter. And it plays very well in Peoria.

Because they are charged with forecasting all hurricanes that threaten US interests, the Center is divided into four interactive units; Hurricane Specialist, Tropical Satellite Analysis Forecast, Techniques Development and Applications, and Communications and Charting.

Most hurricane radio transmissions take place on the shortwave utility frequencies. However, hurricane buffs can find lots of local action when the Coast Guard starts flying the hurricane storm warning flags.

First, NOAA VHF weather stations provide continual updates and warnings for areas about to be hit. Program the local frequency as part of your scanning tree rather than use the WX switch. Or add an inexpensive weather radio to your monitoring setup.

Some of the storm's characteristics work in your favor. Hurricanes take between 10 and 12 days to run their course, so an approaching storm is no suprise. Storms need open water to keep building. Once a hurricane hits land, it begins to lose power. And they produce atmospheric conditions that can lead to unpredictable skips. Patience may result in gleaning unusual catches from all the hash.

However, the best place to start is with local and state law enforcement agency frequencies. They become monitoring hot beds as a hurricane approaches. Be sure to check both tactical and interagency frequencies.

Hurricanes result in medical problems ranging from storm related injuries to heart attacks and psychological breaks. Don't forget the medical paging, hospital, EMT, and life flight channels.

TV reporters love to tape stories from storm-battered beaches and rainswept locations. Searches should also include the local remote news channels.

Aeronautical frequencies are a good bet for local weather and some occasional and amazing skips. When Hurricane Bob hit our area last year, I managed to catch the air chatter from Long Island.

Flying conditions ahead of a hurricane are often pleasant,

SELECTED AERO FREQUENCIES

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121.9750 - 122.6750ATC FAA flight service stations
122,0000 - 122.0500 En Route flight advisory
122.0000 - 122.1500 FSS receive only
122.3000 - 122.4000 FSS en route simplex
122,7000 - 122.7250 Unicom, aeronautical advisory
122.8000 Unicom, aeronautical advisory
122.9000 Multicom, search and rescue, search and rescue training, airport advisory
122.9500 - 123.0000 Unicom aeronautical advisory
123.0250 Helicopter air-to-air
123.0500 National Hurricane Center
123.1000 Search and rescue
304.8000 National Hurricane Center
ATC = Air Traffic Control
FSS = Flight Service Station
"Storm Trackers" use "Teal xx" and NOAA Aircraft Operations "NOAA xx" call sign.

SAFFIR-SIMPSON DAMAGE POTENTIAL SCALE

Developed by Herbert Saffir and Robert Simpson as a quick guide to a storm's potential

(Category, barometric wind speed MPH, surging seas and damage pressure in feet inches/millibar)

One over 28.9474 to 954 to 5
Minimal+ 980 mb
Two 8.50--28.9196 to 1106 to 8
Moderate 965--979
Three 27.91--28.47111 to 1309 to 12
Extensive 945--964
Four 27.17--27.88131 to 15513 to 18
Extreme 920--944
Five under 27.17 over 155 over 18
Catastrophic 920
Definitions: Tropical depression--winds under 39 mph (34 knots).
Tropical storm--winds between 39 and 73 mph (34 to 63 knots).
Hurricane Hotlines: East Coast & Gulf States 900-410-6622.
Hawaii 900-410-2263.
Callers are billed 50 cents for the first minute and 45 cents for each additional minute. Calls last approximately 2 minutes.

therefore aero weather and airport conditions and predictions become important safety factors.

VHF marine channels are also productive. Once the Coast Guard flies the two square red hurricane flags, their vessels head for safety. Smaller boats often go up-river away from the coastline. CG planes and choppers are tied down or hangered.

However, if absolutely necessary, the "coasties" will sail or fly "into harms way". And that can make interesting listening.

Once the storm passes, the Red Cross pick up the human devastation while the Federal Emergency Management Agency coordinates property recovery efforts. In hard hit areas, 42.4200 and 47.4200 can yield interesting transmissions.

Don't forget electric, telephone and cable companes. They'll be busy replacing downed poles, restringing lines, and restoring services and their radios will be active.

Your own power can also be a problem. Consider adding an uninterruptable power supply or uninterruptable battery supply to your scanner. These units charge up during normal conditions and kick in when the power fails. Built as PC computer power backups, they are easily converted to alternate power sources for AC scanners.

Monitoring becomes easy if you have frequency lists; pre-storm, storm, and post-storm. Generate yours on a home computer or type them on 3 x 5 cards.

Finally, hurricanes should be treated with respect. If local officials order an evacuation, grab the family, a handheld scanner, and go. If you've ever been through a category four or five blow, you probably have a healthyrespect for the ill-winds that blow.

HURRICANE NAMES 1992 & 1993

In 1941, George R. Stewart wrote a novel that featured a meteorologist who named tropical storms after women. During the Second World War, fiction turned to fact and eventually hurricanes began carrying both male and female names.

These are the Atlantic hurricane names.

Andrew, Arlene, Bonnie, Bret, Charlie, Candy, Danielle, Dennis, Earl, Emily, Francis, Floyd, George, Gert, Hermine, Harvey, Ivan, Irene, Jeanne, Jose, Karl, Katrina, Lisa, Lennie, Mitch, Maria, Nicole, Nate, Otto, Ophelia, Paula, Phillipe, Richard, Rita, Shary, Stan, Tomas, Tammy, Virginie, Vince, Walter, Wilmer

NOAA WEATHER RADIO FREQUENCIES

162.4000, 162.4250, 162.4500, 162.4750, 162.5000, 162.5250, 162.5500

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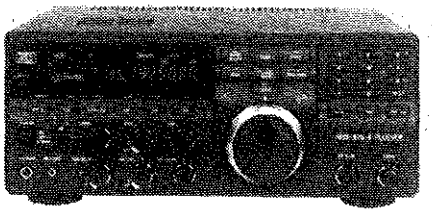
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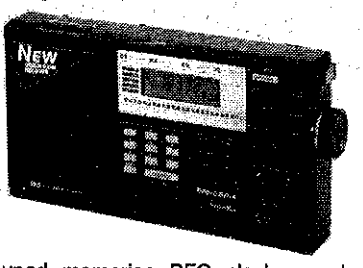
❒ **Kenwood R-5000**
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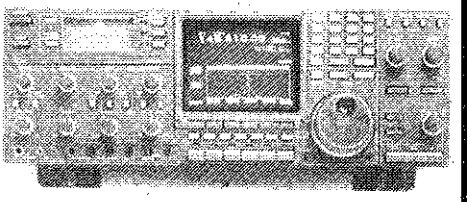
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Note: Many more antennas available. See catalog.

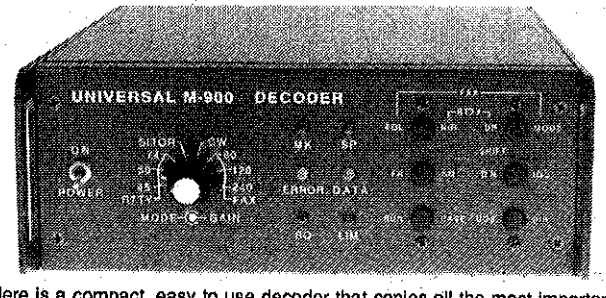
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- Sitor Mode A & B
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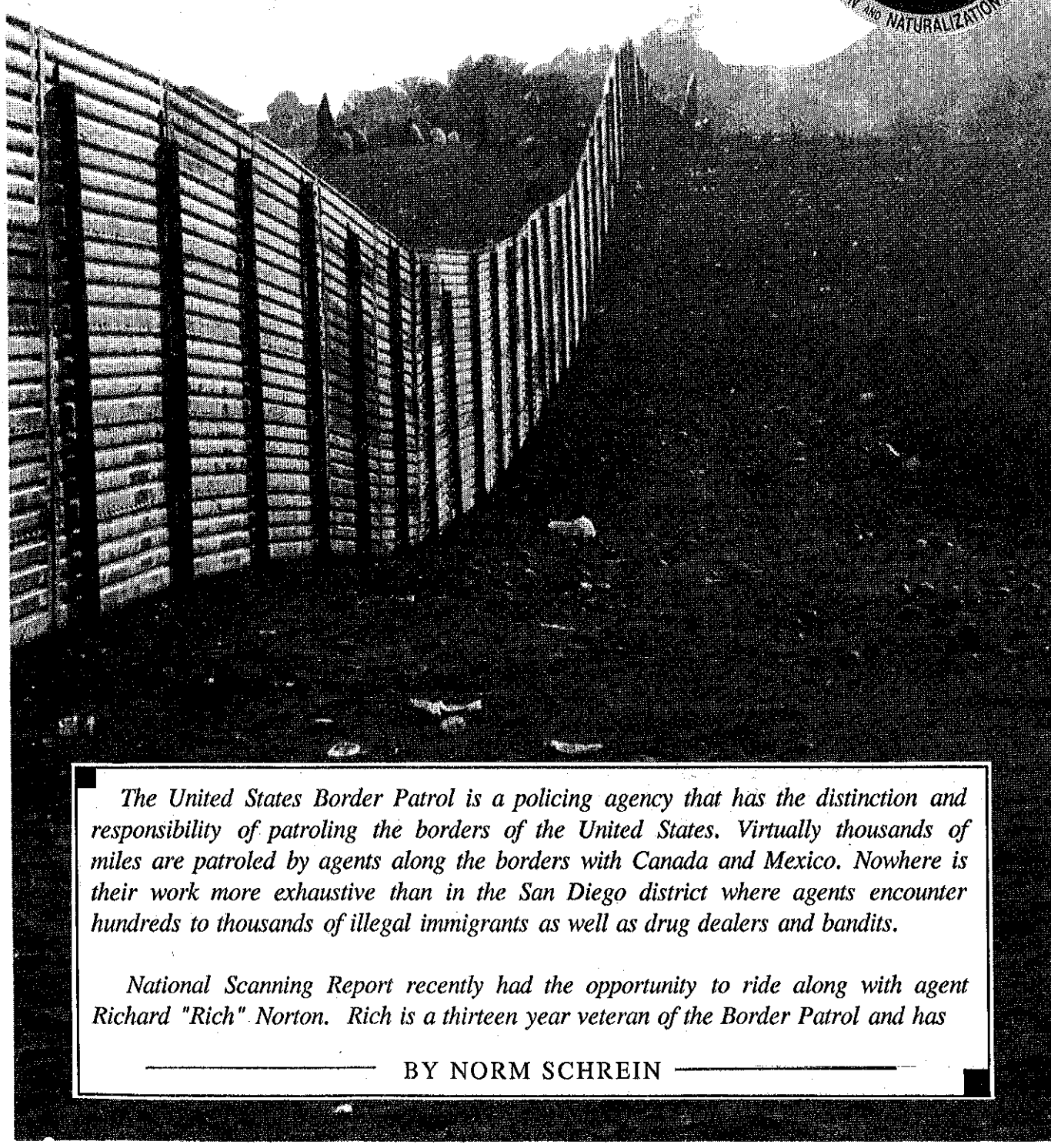
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Scanning the Front Line



The United States Border Patrol is a policing agency that has the distinction and responsibility of patroling the borders of the United States. Virtually thousands of miles are patroled by agents along the borders with Canada and Mexico. Nowhere is their work more exhaustive than in the San Diego district where agents encounter hundreds to thousands of illegal immigrants as well as drug dealers and bandits.

National Scanning Report recently had the opportunity to ride along with agent Richard "Rich" Norton. Rich is a thirteen year veteran of the Border Patrol and has

BY NORM SCHREIN


Our Host, 13-year veteran, Rich Norton

spent the majority of his time along the U.S. -Mexico border.

The San Diego sector consists of three offices that conduct their operations directly on the border. The Border Patrol has jurisdiction within 25 miles of the international border, but it is within a few miles of the border between San Diego and Tijuana that the majority of the action occurs.

One area of concern for Border Patrol agents is an area known as Smugglers Canyon. The canyon is a natural cover area for those going from Mexico to the U.S. illegally. It is also an area that the bandits (who live in Mexico but work both sides of the border) operate. The bandits will prey upon the illegals, many times injuring or killing them for whatever possessions they have brought along.

This area has so much activity that the San Diego Police Department has organized a Border Crime Intervention Unit. The officers, whose salaries are paid for by the citizens of San Diego, have the specific job of protecting the illegal aliens from the bandits.

On the evening NSR was touring the border area, we had the opportunity to speak with Sergeant Rick Adams of the San Diego Police Department. Rick relays the time when a bandit confronted his patrol with what appeared to be a shotgun. The bandit had the intention of robbing the officers, thinking they were "illegals." He lowered his shotgun (which later turned out to be a cattle prod designed to look like a shotgun) at the officers and demanded their possessions. "It was the last mistake he ever made," says Sgt. Adams, "as he was shot and killed by one officers of the team."

Shooting incidents occuring along the border, while not an every day occurance, do happen often enough to be etched into the Border Patrol agents' memories. Agent Norton remembers another time when a shooting occured where the bullet went through the fence and hit a child in Mexico. And still there was another shooting in which an officer was being stoned by the illegals and was forced to shoot back in self-defense. Rich mentioned that there are three times that an agent is permitted to use deadly force of any kind. The officer has to fear for his life, the life of a fellow officer or of an innocent third party.

I was very impressed [with the July/August National Scanning Report]. You have done an excellent job.

Bob Grove, Brasstown, NC

Many times those causing problems for the Border Patrol simply slip back over the border into Mexico. The agents authority ends at the border and they are very careful not to cross the border at any time. Oftentimes it is hard to tell just exactly where the border is. For example, the border crosses the Tia Juana River and while the fence is quite easily seen on both sides of the river, it does not exist in the middle. "There is a storm drain on the north side that we know is in the U.S., going beyond that is in a grey area," according to Rich.


A border patrol agent scans the horizon with a night vision scope.



Border Patrol agents stop some "illegals" who are likely to be released and then caught again.

If a chase starts on the U.S. side and the suspect flees to Mexico, the Border Patrol agents can contact the Tijuana Police or a special Mexican para-military group known as "Beata Team". When they know the Tijuana Police are coming on the Mexican side, they will come back into the U.S. so we can pick them up.

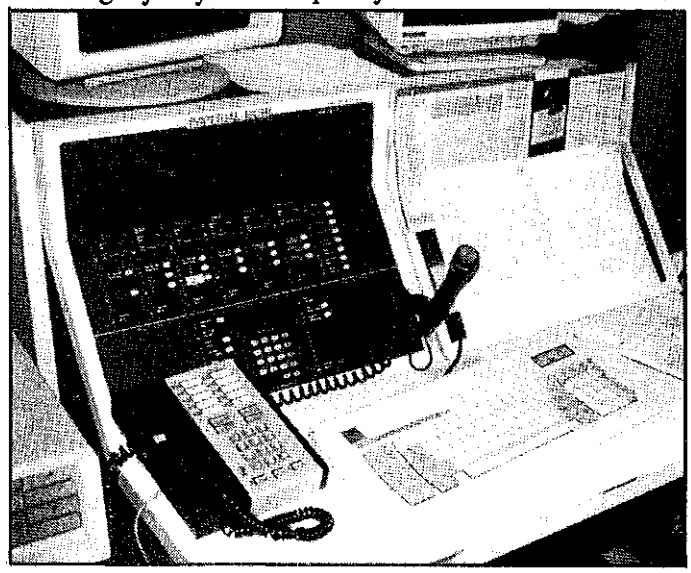
"You've got to remember that the fence is not only the border, but also the end of civil rights as we know them," says Rich.

The agents don't chase down everyone that crosses the border illegally says Rich. "There is a flat area that belongs to an aggregate company, and the kids cross over to play baseball or football. In the evening they go home, so they're not a problem to us."

The agents are concerned with those entering illegally with the intention of staying. Also, they're looking out for smugglers of drugs and other illegal substances.

The Border Patrol station in San Ysidro looks very much like a mini military compound. There are separate buildings for communications, maintenance and other support facilities. There is also a detention facility. It is in this facility where the illegals are kept until return to Mexico. For the most part, aliens waive their right to a hearing and return voluntarily. If they do request a hearing, it may be months before it happens and they will stay detained until the hearing. "They would rather take their chances and try again," says Rich. In fact, it is not unusual for an officer to arrest the same person that he arrested earlier on his shift.

As far as communications go, each station has its own operating frequency and Border Patrol



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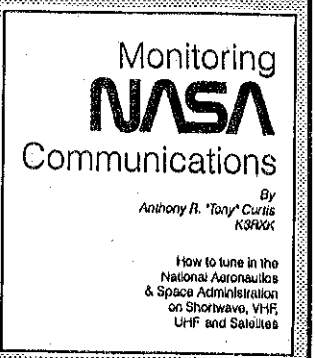
vehicles have the ability to monitor 14 channels. The Brownfiled station operates on 162.900 MHz, Chula Vista uses 163.700 MHz and Imperial Beach operates on 163.775 MHz. All operate under the call sign KAK 827 and use simplex mode. If a greater range is needed the repeater pair of 162.825/ 63.625 MHz (KAK 820) is used.

The officers also carry a hand-held radio, either Motorola or King. Their means of transportation can range from helicopter to Yamaha all terrain vehicles to Ford Broncos or bicycles and horses. Other items issued are shotguns, 357 magnum revolvers, night vision scopes and riot helmets.

The Border Patrol can provide interesting listening approximately 50 miles on either side of the international border. The next time you have the opportunity, tune in the men and women of America's front line.

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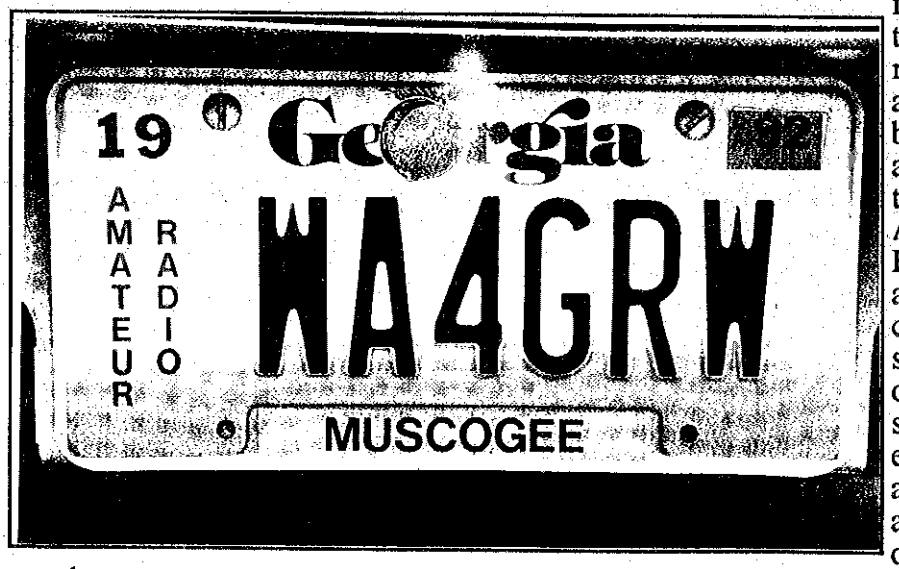
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HAM RADIO

NOTHING AMATEUR ABOUT IT

If you have passed on listening to the amateur radio bands on your scanner because you felt they lacked the excitement of the public safety bands; think again. Had you been listening to the 146.925 MHz repeater in the greater Miami area shortly after Hurricane Andrew, you would have found enough excitement and drama to last a lifetime.

"The enormity of the destruction was unbelieveable," said Evelyn D. Gauzens (W4WYR). "Florida City was almost completely destroyed. Homstead Air Force Base was completely destroyed. Also the Cutler Ridge Mall no longer exists and the Cutler Ridge housing development has sustained a great deal of damage."



At her home, Evelyn was operating her ham station when the winds took out the power lines. She then powered her station by generator. She also commandeered a school building nearby where other hams operated nets. There were hams stationed at shelters, private homes, Dade County EOC, American Red Cross and the FEMA headquarters. The job of the ham radio operators, in addition to running health and welfare nets was to co-ordinate communications for the relief work.

The hams operating in the shelters took care of co-ordinating food and all other supplies. Hams also took care of dispatching medical teams, vehicles and staff. There were 250,000 people displaced by the storm. Over 65,000 were in shelters, with the remainder in private homes, hotels, and camping out. What this all means is that there was plenty of interesting radio activity on the ham bands for scanner monitors.

Amateur radio operator and scanner enthusiast, Frank Williams (WA4GRW) from Columbus, Georgia, says, "Listening to amateur radio should be considered by every scanner hobbyist." Listening to hams can provide some good inside information. For instance, during drive times, information on traffic tie-ups, road construction and accidents can be very accurate as hams, "Will tell it like it is." According to Frank. "Police and emergency crews who have seen more than one accident, can sound pretty unemotional on the air. But an amateur radio operator is likely to comment, 'There's a car up on the curb, two or three injuries, someone is bleeding; better get a rescue crew here quick'."

Frank also says, when severe weather is in the area, traffic on the 146.610 MHz repeater can be very interesting. The Columbus, Georgia, Amateur Radio Club, which

operates the repeater, has trained amateurs at the NOAA weather office. These hams are weather spotters in the field who observe cloud formation, rainfall amounts, reports of hail, lightening strikes and damage caused by storms.

From these few examples, you can tell that amateur radio can provide lots of interesting and exciting listening. Anyone with a scanner can tune into these ham radio operators. They can be found on the following bands:



Jack Masters (N8QEF) operates a field day radio station in Bellbrook, Ohio.

29.200--29.700 MHz---called the 10 Meter FM band; many times long distance communications from around the world can be heard.

52.000--54.000 MHz---called the 6 Meter FM Band; operates like the 10 meter band, but distances heard are shorter.

144.000--148.000 MHz---called the 2 Meter FM band---all kinds of local action hear here. Look for repeaters operationg above 145.000 MHz.

222.000--225.000 MHz--called the 1 1/4 Meter FM band;

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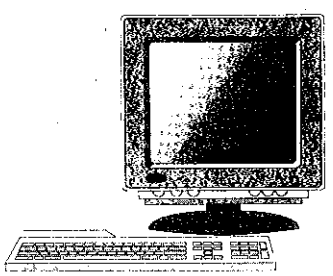
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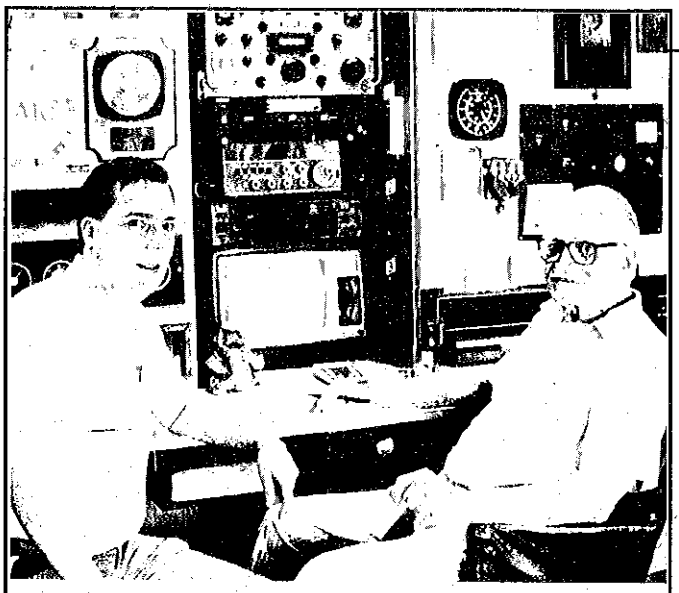
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Norm Schrein visits former Senator Barry Goldwater at his home in Arizonia. During the Vietnam War, Senator Goldwater had volunteers operate his large assortment of radio gear 24 hours a day. The station was used a a MARS (Military Affiliate Radio Service) station passing messages back home from the troops in Vietnam.

much the same as the 2 meter band. Look for repeaters above 223.850.

430.000--4500.000 MHz--called the 70 Centimeter band. All types of activity here, including amateur TV, moon bounce, etc. Check out frequencies above 432.000 MHz and look for repeaters above 440.000 MHz.

Some Famous Hams

Barry Golwater (K7UGA)--former U.S. Senator
Walter Cronkite (KB2GSD)--former CBS news anchor
Chet Atkins (WA4CZD)--country music star
Ronny Milsap (WB4KCG)--country music star
King Hussein (JY1)--King of Jordan
King Juan Carlos (EA0JC)--King of Spain
Jean Shepherd (K2ORS)--writer and radio personality
Joe Walsh (WB6ACU)--rock star
Ernest Lehman (K6DXK)--screen writer
Garry Shandling (KD6OY)--commedian
Marlon Brando (F08GQ)--actor
Andy Griffith (WA7WYN)--actor
Priscilla Presley (N6YOS)--actress

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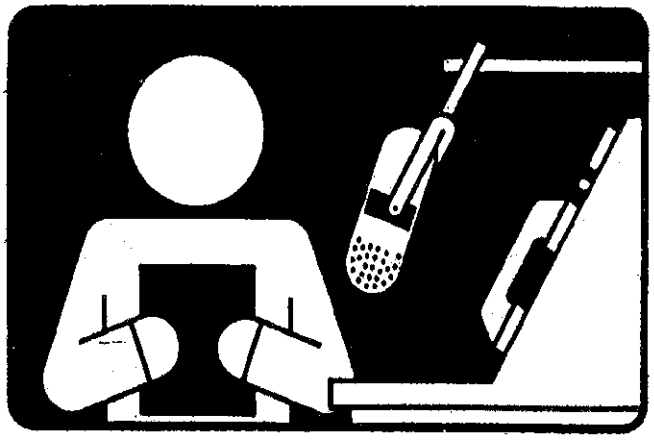
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*Publication scheduled for fall '92.



DISPATCH!

Frequency Exchange

By Larry Miller

Shakin'

Southern California's penchant for earthquakes has set many monitors to searching the airwaves for those elusive seismic sensor frequencies. These sensors, usually maintained by the US Geological Survey, transmit a continuous tone on scannerband frequencies that changes pitch or "warbles" when any seismic activity occurs. These sensors do work and the warbling tone often starts a few seconds before the actual ground movement, affording listeners precious seconds to get to safety....just in case.

John Kord of Alta Loma listed these frequencies as active in his area: 162.800, 167.195, 165.810 and 167.195. John told me that he believes the frequencies are horizontally polarized, making reception better when your antenna is pointed horizontally to the ground, instead of the traditional vertical orientation.

Kevin Novack of Gresham, Oregon found seismic sensors on 166.420 and 171.220 MHz using an ICOM W2A. His research revealed that the 216 to 220 Mhz range is also used for geophysical research, though no sensors were found operating within that range yet.

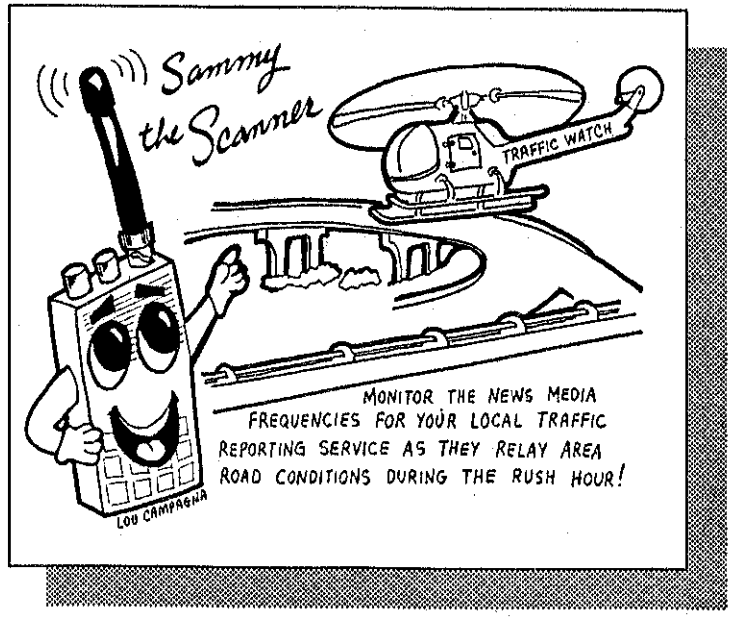
Jim Hawthorne in Rainbow, California reported 167.195 active via his BC200XLT with north/south horizontal antenna positioning. His Radio Shack 2022 with a vertical Comet antenna also pulled in a good signal. Thanks to Jim, Kevin and John for passing along the information!

Check out the USGS Quake BBS at (800) 358-2663. Quake information and updates can be heard by calling the USGS-Menlo Park at (415) 329-4025 or UC Berkeley-Quake Info Center at (510) 642-2160.

Moosing Around

The Craig, Colorado Police Department were up to their badges in trouble recently when a pair of moose drifted into the rural town. Officials of the Colorado Division of Wildlife recommended to police that people be kept away from the animals for safety reasons. This order, according to Sgt. Don Walden of CPD, was broadcast over a police dispatch frequency. "A lot of people in the town have police scanners, and when they heard that the police were chasing moose, they came out to watch. They drew a large crowd...We had several streets blocked with traffic."

Two hundred people followed the moose through Craig's downtown and residential streets, photographing the animals. Said resi-



dent John Kinkaid, "We haven't seen that much excitement since the Olympic torch passed through town in 1984." James Richardson of Littleton passed this along.

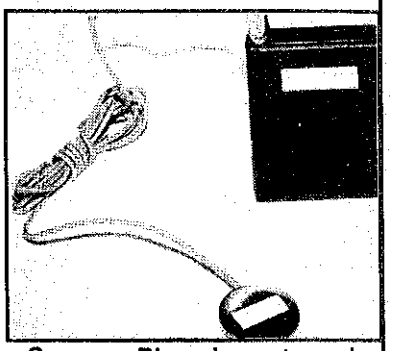
Giant Frequency List

Joseph Bial of Chagrin Falls, Ohio, has sent in this giant list of frequencies from the northeastern part of the state. Joseph says that in his monitoring he uses various hand-helds, base stations and antennas. "My most usual are the Pro 34 & 37 handhelds, an ICOM 7000 and Bearcats 760 XLT & 800 XLT. My antennas include a Diamond Discone and Scanner Beam (the best). I also use a Kenwood R2-1 in my car." Many thanks, Joseph.

33.860	Richfield Twp., Northfield Village, Northfield Center, Macedonia Fire Depts.
33.900	Cleveland Fire Dispatch Net
39.540	Cuyahoga County Sheriff
39.600	Moreland Hills Police
39.620	Boston Heights Police
39.800	Shaker Heights Police
39.820	Chagrin Falls, Bentylville, Moreland Hills, South Russell Police
39.840	Solon Police
45.020	Ohio State Hwy. Patrol
44.980	Ohio State Hwy. Patrol, Chardon District
46.140	Painesville, Mentor, Montville, Willoughby Hills Fire Depts.
46.400	Geauga County Mutual Aid
46.400	Russell Twp., Middlefield, Bainbridge Twp. Fire Depts.
46.460	Bedford Heights, Orange Village Fire Depts.
46.460	Chagrin Falls Fire & Rescue
46.480	Brooklyn Heights Fire & Rescue
47.220	Ohio Turnpike Commision
151.310	Metro Park Police
151.340	Independence Police Channel 1
153.890	Cleveland Fire Dispatch Net
155.775	Independence Police Channel 2
158.985	Ohio Turnpike Commision
159.165	Ohio Turnpike Commision
159.210	Ohio Turnpike Commision
155.685	Ohio Turnpike Commision, simulcast
155.790	Ohio Turnpike Commision, simulcast
154.935	Ohio Turnpike Commision
154.130	Garrettsville Fire Dept.
154.190	Pepper Pike, Mayfield Heights, University Heights Fire Depts.
154.370	Stow Fire Dept.
154.385	Independence Fire Dept.
154.430	Auburn Twp. Vol. Fire Dept.
155.370	Austintown Police
155.400	Geauga County Hospital.
155.550	Jefferson Police
158.730	Youngstown Police Dispatch Channel 1
158.790	Youngstown Police Tactical Channel 2
158.745	Chesterland Fire Dept.
159.375	State Park Police
173.225	The Lake County News Herald
450.1875	Traffic Reports
453.000	The Plain Dealer, Photographers
460.025	Lakewood Police
460.075	Lakewood Police
460.500	Cleveland Police Special Details, Akron Police
460.150	Cleveland Police
460.250	Cleveland Police
460.350	Cleveland Police
461.575	The Warren Tribune
851.5375, 852.2125, 853.5375	Geauga Co. Trunked System
855.5375, 856.0375, 856.0875	Geauga Co. Trunked System
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Behind the Bluegrass Curtain

In the last edition of Dispatch we made some disparaging remarks about House Bill 617, Kentucky's anti-scanning law. That law make it illegal to have a scanner in your car and makes it legal for police to confiscate your radio and destroy it -- without a conviction -- if you are caught with a mobile scanner.

Steve Morgan, WB4NHO, is the Kentucky Section Manager for the American Radio Relay League, writes to say that he and his State Government Liason, Ron Landrum, KM4DX, "were instrumental in getting HB 617 passed."

House Bill 617, says Steve, actually amends a 1942 law (KRS 432.570) and now makes it legal for ham radio operators to carry "a scanner or radio capable of receiving police frequencies." Hams often use their radios to provide public service. (See this month's article on monitoring ham radio.) For those who are not licensed ham radio operators, the penalties remain on the books.

Technocreeps

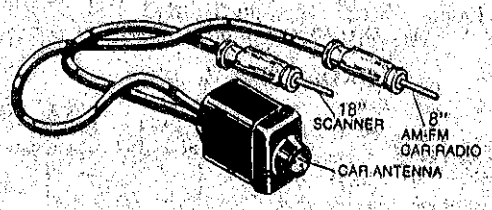
Jeff McKinzie of East McKeesport, Pennsylvania was outraged by a newspaper article about scanning that he read. In it, Norman Black, a spokesman for the Cellular Telecommunications Industry Association, expresses his distaste for people who use scanners to monitor phone calls. "As far as we are concerned," said Black, "we are talking about a bunch of technocreeps who are eavesdropping and violating our privacy in the name of a hobby."

Tom Bernie, president of Cellular Security Group and a regular National Scanning Report advertiser is quoted in the same article as delivering a K.O. rebuttal: "[Cellular phone call users] are making a radio broadcast, not making a telephone call."

"Well," says Jeff, "I have news for them. We are not 'technocreeps,' we are professional scanner monitors and operators. I think that all of us scanner listeners should get together and write a nice long letter to the Congress saying that they cannot prohibit the manufacture of scanners that receive cellular frequencies."

Wrong-o, Jeff. They can and probably will. The Cellular Telecommunications Industry Association is a powerful anti-scanner lobbying group.

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The DX Radio Supply AM/FM - Scanner Antenna Converter turns your car's AM/FM antenna into a full-range scanner antenna. There's no gluing, scraping or soldering. Just plug it in. The AM/FM - Scanner Antenna Converter installs in just seconds and does not interfere with regular radio reception. Cover to 900 MHz. Equipped with standard Motorola plug.

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Scanning the NFL

Several teams, including the Kansas City Chiefs, the Buffalo Bills, Minnesota Vikings and New Orleans Saints have been wiring their quarterbacks with a transmitter. Offensive tackles wear receivers in their helmets. While Control Dynamics, the company that manufactures the transmitters, was not giving out frequencies, we do have another list of football frequencies. This one comes from Chuck Gysi in the Pop'Com 1992 Summer Communications Guide.

Atlanta Falcons	177.000
Buffalo Bills	154.600, 184.400, 467.8500, 467.000
Chicago Bears	151.625, 180.600
Cincinnati Bengals	183.000
Cleveland Browns	151.685, 178.000
Dallas Cowboys	175.400
Denver Broncos	180.800
Detroit Lions	183.000, 462.675, 462.700
Green Bay Packers	181.800
Houston Oilers	175.800
Kansas City Chiefs	181.400, 464.775



Los Angeles Rams	183.200
Miami Dolphins	151.625
Minnesota Vikings	151.955, 461.050, 464.375
New England Patriot	151.625, 154.570, 154.600, 199.400, 463.7375, 463.7625, 464.425
New Orleans Saints	179.500
New York Giants	154.540, 181.400, 184.000
New York Jets	151.625, 151.835, 183.000
Philadelphia Eagles	151.775, 154.570, 184.000
Pittsburgh Steelers	151.625, 184.000, 467.750
San Francisco 49ers	151.775
San Diego Chargers	154.570, 461.6375
Tamp Bay Buckaneers	151.775
Washington Redskins	181.000

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Powering Up Nashville

If you live in Nashville, Tennessee, and have been having trouble picking up Metro Police, help is on the way. According to Charles Gossett, a new 140-foot radio tower is being constructed off Ben Allen Road in East Nashville. Actually, the project entails moving an existing tower off the fire hall at 21st Avenue North and Charlotte Avenue and re-erecting it at the Virginia Avenue pumping station.

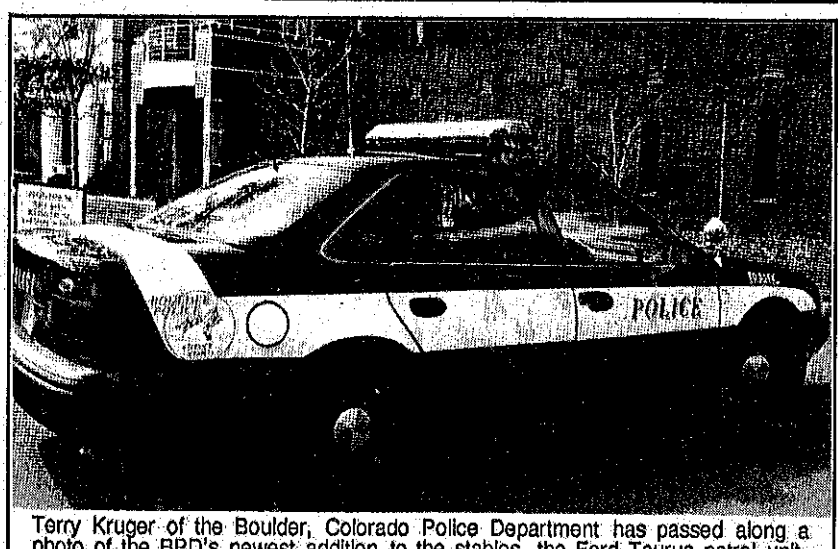
Police Spokesman Don Aaron said that "The tower should solve the dead spot problem (officers) currently experience in Joelton, Goodlettsville, and Madison areas of Nashville."

In Nashville, try these Metro Police frequencies: 39.0600, 39.5400, 153.8750, 154.7100, 154.7550 (car-to-car), 154.8150 (detectives), 154.8600, 155.010, 155.070 (west), 155.1300 (countywide), 155.3100 (east), 155.3700, 155.4900, 155.5350, 155.5800 (south), 155.6400 (traffic), 155.6700, 155.7300, 155.8500, 156.0150, 156.0300, 156.0900, 158.7900, 158.8500, 158.9100, 158.9700, 159.0300, 159.1500, 159.2100, 159.210 and 460.4000 MHz. Those frequencies courtesy of Police Call. Thanks to Charles Gossett for the tip.

Throwing Off Sparks

Charles Murphey of North Carolina writes to say that "I read somewhere that the Voice of America transmitter site in Greenville has its own fire department. Is this true and if so, what is the frequency? I live a little more than 10 miles away in Farmville so I should be able to hear them."

Well, it's not so much a fire department as it is a single field unit (a pickup truck). Whether it is dispatched or someone simply runs out to the garage and starts up the truck is unknown. In any case, the transmitter site, which is used to send U.S. government radio programs overseas, is so powerful that the the feedlines sometimes throw off sparks and set the field on fire.



Terry Kruger of the Boulder, Colorado Police Department has passed along a photo of the BPD's newest addition to the stables, the Ford Taurus patrol unit. Nice looking wheels!

Heartland Trunked System

More and more agencies are switching to new 800 MHz trunked systems. Users love it and monitors cringe at the thoughts of monitoring dozens of frequencies, used by everyone from the police to city trash trucks. If you're ever in the San Diego, California, area, try out the following Heartland Fire Protection District trunked system frequencies: 856.175, 856.200, 857.200, 858.175, 858.200, 859.200, 860.200, 860.225.

Run these as trunks, no delay and don't forget to turn off (and on) data channels as needed. Thanks to Jerry Pickard in Santee for the numbers and the tips.

In A New York Minute

A loyal but anonymous reader relays the following frequencies for statewide use in the New York area: 151.220 Fire Towers F-1; 151.280 Fire Towers F-2; 151.145 Intersystem; 151.250 Fire Control F-3; 151.265 Fire Control F-4; 159.300 Forestry; 159.435, Fire Control.

New York City Radio Codes

Another anonymous reader has sent in a photocopy of the 10-Codes used in New York. Exclaims the writer, "These are directly out of the Fireman's Manual!" Included is everything from a 10-22 (outside rubbish fire) to a 10-25/code 3 (Smoke is creeping from a manhole) to a 10-60 (airplane crash) to a 10-45 (discovery of a fatality at a fire or emergency). The entire list, which includes the firefighter's handwritten notes, is too large to reprint here but we'll be happy to send you a copy of all 7 pages for $3.00 plus a self-addressed, stamped envelope. The address is P.O. Box 360, Wagontown, PA 19376.

Radio at the Amusement Park

Someone FAXed us a copy of the actual radio license for Kings Island Amusement Park just north of Cincinnati, Ohio. The license contains over 18 different frequencies used by the company. Power runs from 1.5 watts to 90 watts. Mobile units are authorized to operate within 25 miles of the park. Thanks to the anonymous member who sent this little jewel in.

Federal Communications Commission
Gettysburg, PA 17326

RADIO STATION LICENSE

KINGS ISLAND AMUSEMENT PARK

Licensee Name: KINGS ENTERTAINMENT CO

Radio Service: IB BUSINESS
Call Sign: KNHE378
Frequency Advisory Number:
File Number: 137673
License Issue Date: 8/30/706
License Expiration Date: 9/30/706

Number of Mobiles by Category: Vehicular ***4*** Portable ***450** Aircraft: ***** Marine: ***** Pager: *****

Station Technical Specifications

FCC I.D.	Frequencies (MHz)	Station Class	No. of Units	Emission Designator	Output Power (Watts)	E.I.R.P. (Watts)	Ground Elevation	Ant. Hgt. To Tip	Antenna Latitude	Antenna Longitude
1:	154.60000	FB	1	20K0F3E	2.000	5.000	765	18	39-20-33	084-16-19
2:	154.54000	FB	1	20K0F3E	10.000	25.000	765	20	39-20-33	084-16-19
3:	461.32500	FB2	1	20K0F3E	90.000	233.000	765	100	39-20-33	084-16-19
	463.67500	FB2	1	20K0F3E	75.000	196.000				
4:	154.54000	MO	30	20K0F3E	2.000					
	154.57000	MO	40	20K0F3E	2.000					
	154.60000	MO	40	20K0F3E	2.000					
	462.76250	MO	1	20K0F3E	2.000					
	462.81250	MO	1	20K0F3E	2.000					
	462.86250	MO	1	20K0F3E	2.000					
	466.32500	MO	25	20K0F3E	2.000					
	467.76250	MO	1	20K0F3E	2.000					
	467.76250	MO	80	20K0F3E	1.500					
	467.81250	MO	1	20K0F3E	2.000					
	467.81250	MO	100	20K0F3E	1.500					
	467.86250	MO	100	20K0F3E	1.500					
	467.86250	MO	1	20K0F3E	2.000					
	468.67500	MO	1	20K0F3E	75.000					

EMISSION DESIGNATOR(S) CONVERTED TO CONFORM TO DESIGNATOR(S)

Highway Call Boxes

What's the deal with the highway call boxes and those stubby antennas, asks David Reese of New York. Well, Dave, you have discovered another great use for cellular telephones. Highway call boxes in many states are simply cellular phones mounted on a post with a solar panel to power them and charge the battery for overnight use. The antenna, of course, does the transmitting from the phone to the cell cite.

Call boxes communications can be heard all across the cellular band (869 - 896 MHz), but

CLIP IT OUT!!

Send newspaper clippings about scanning to NSR, Box 360, Wagontown, PA 19376

beware...cellular listening is illegal! National Scanning Report does not recommend or encourage cellular monitoring. On the other hand, neither do we recommend or encourage anyone to use a cellular phone who is communicating information that they do not want broadcast on the public airwaves.

Chicago DEA

Roy J. Cloutier was kind enough to list the channel plan for Chicago area Drug Enforcement Administration units:

CH	IN	OUT
1	416.050	418.625
2	416.325	418.900
3	418.750	418.750
4	418.675	418.675
5	Unknown	418.825
6	416.200	418.950
Zulu	418.975	418.975

Mystery Airplane

A monitor at our West Coast Listening Facility reports some strange goings-on in the skies. Frequency 250.2 MHz has been active with an aircraft on high Mach speed runs. This airplane does not identify himself and seems to be reporting Mach passages to an unheard ground station. Mach 1, Mach 2, Mach 3, Mach 4..." and so on, all the way to Mach 20! If this airplane is really hitting those numbers, it must be one of the mysterious and highly classified "Aurora" jets, capable of hypersonic speeds.

The Aurora Project (sources say this codename has been changed) reportedly works out of Edwards Air Force Base, and Beale AFB, CA. Other frequencies reportedly in use are 119.25 (Edwards AFB Flight Test), 316.1 and 319.9. Keep your eyes to this column, our intelligence sources are keeping us apprised.

DX Radio Supply

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You *Can* Take It With You

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Jim Small
Long Beach, CA

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> 12 feet of cable
> Motorla and BNC connectors
> Great for base, mobile or handheld



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North Carolina Smokies

Passing through North Carolina? Then you might like to try these frequencies on for size before NCHP's overheads start flashing in your rearview mirror. Thanks to Jack Prindle, AOSC, for the Smokie channels.

Ch	Base	Ch	Mobile	Ch	Base	Ch	Mobile
1	42.620	2	42.780	7	42.640	8	42.760
3	42.520	4	42.800	9	42.500	10	42.700
5	42.600	6	42.660	11	42.820	12	42.860

Raleigh Repeater	154.680
NCHP Link for 42.520	452.275
NCHP Link	452.400

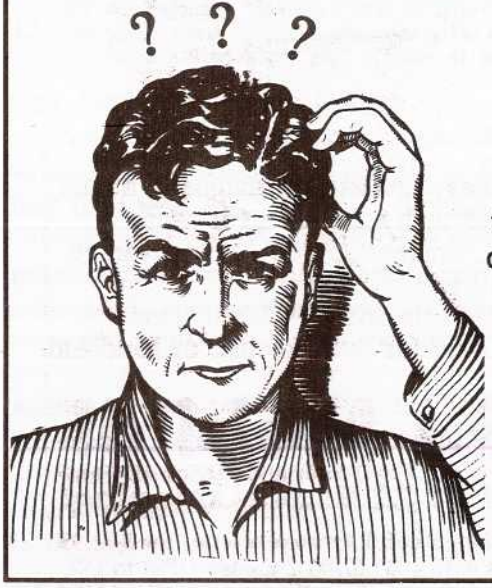
Pennsylvania HAZMAT Monitoring

Steven Wise of State Line, PA told us a great story about monitoring an hazmat incident. Seems a tractor trailer overturned after swerving to miss a dog in the road on Interstate 81, just off the end of Washington County Airport's runway. The trunk spilled diesel fuel all across the highway, endangering its load of highly flammable pool cleaning disinfectant.

Washington County Fire called for a Hazardous Materials Response Team upon arrival at the scene

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and called out mutual aid from Franklin County Fire. Both north and southbound lanes of I-81 just south of the Maryland-Pennsylvania line were closed for 12 hours for safety reasons by the Maryland State Police and Pennsylvania State Police. In addition, Washington's main runway was closed for the duration, traffic was rerouted onto Route 11 and even the county commuter bus was forced behind schedule.

Steven reports the following frequencies were in use during the incident:

Washington Co. Fire	33.86, 33.80, 33.84
Mutual Aid Fire	154.280
Franklin Co. Fire	46.16, 46.10, 46.36
Maryland State Police	39.34, 39.10
Penna.State Police	155.670, 155.910
Washington Co. Airport	120.3, 121.9
Maryland Hwy. Dept.	47.32, 453.050, 452.350

Seattle Freqs

They call Seattle, Washington the "Hub of the Northwest." Here are some frequencies contributed by Bruce Ames via AOSC for your listening pleasure next time you're around SEA way.

118.0	SEA ATIS	450.4125	KOMO TV-4
119.2	App/Dep	155.925	Renton/Tukwila, City of SeaTac Police Dispatch
120.4	App/Dep	155.535	PD Car to Car
119.5	App/Dep	460.425	Seattle PD Information
123.9	App/Dep	460.475	Seattle PD Southside Dispatch
119.0	SEA-TAC Tower	460.175	Seattle PD Westside Dispatch
121.7	SEA-TAC Ground	460.250	Seattle PD Car to Car
128.0	SEA-TAC Clearance Delivery	460.550	County Mutual Aid
453.2	Airport Police	460.400	King County Sheriff's Department Southwest Dispatch
460.775	ARINC	460.525	King County Sheriff's Department Federal Way Dispatch
460.725	United Airlines		

Calling Dispatch

At Dispatch, we value your input as informed citizens and scanner listeners. In fact, this is, more than any other, your column since what appears here comes strictly from the readership.

This month, we salute the club members who made this column possible with their input. In alphabetical order, they are: Mr. Anonymous, Ohio; Andrew Bemak, Cleveland, Ohio; Joseph Bial, Chagrin Falls, Ohio; M.D. Bicknell, Edwarsdsburg, Michigan; Jack Blum, Tri-Cities, Washington; Richard Boehm, North Massapequa, New York; Abery Ender, Los Angeles, California; "ERB", New York, New York; Garry Fleming, Lethbridge, Alberta; Scott Glicker, Sunrise, Florida; Charles Gossett, Nashville, Tennesse; Shayne Lovitte, Mobile, Alabama; Thomas Marcinko, Frankfort, Indiana; Jeff McKinzie, East McKeesport, Pennsylvania; Tracy Merritt, Steve Morgan, Owensboro, Kentucky; James Richardson, Littleton, Colorado; Christopher Sage, Spencerport, New York; Patrick Shawgo, San Antonio, Texas; Scott Thornberry, Corey VanWormer, Saginaw, Michigan; K.D. Wentzel, Charlotte, North Carolina; Roger West, Amery Wisconsin and Donald Wolke, Elida, Ohio.

Thanks to all. We look forward to hearing from you -- and good listening!

LARRY

Join Us for the First Annual

SCAN-N-TAN

Four-Day Cruise to the Bahamas



Pack your bags. Pick out your loudest Hawaiian print shirt. Bring your toothpaste and toothbrush. And don't forget your scanner. It's the first annual National Scanning Report/Bearcat Radio Club "Scan and Tan" cruise.

For as low as $459.00, you can spend four luxurious days on board the Premier Cruise Ship Oceanic. It's a scanning convention on the high seas!



You'll leave from Port Canaveral on June 14th but don't get settled in too fast. Before the ship leaves we'll be passing out frequency lists for the nearby Kennedy Space Center and Patrick Air Force Base where there's sure to be some once-in-a-lifetime listening. Club headquarters and NatScan staff members will be available to answer your questions or to give a helping hand.

Once underway, you can try your hand at some exotic scanning, keeping an ear on the marine band (especially 156.800 MHz--Channel 16), tune in the ship's officers as they move about the ship with their handheld radios, or listen for those rare signals that can drift in from all over the Caribbean and South America. There'll be scanning seminars, contests and prizes and one lucky person will walk away with a brand new Uniden Bearcat 200 XLT.

There's so much to do on the Oceanic that you may just forget about your scanner. Swim in one of the two Riviera pools on top deck. Work off some of that tension with a game of hoops. Or grab a deck chair and soak up the warm sun and cool ocean breezes. There's something for everyone to do on the Oceanic! In fact, kids under 2 are free.

Of course, you'll be touring beautiful Nassau, shopping for values, or perhaps take a side trip to Salt Cay, the site where the TV show "Gilligan's Island" and the movie "Splash" were filmed. The Bahamas are a beautiful group of 14 large and 700 small islands with a beautiful climate and friendly atmosphere.

Friday, you'll be back home, refreshed and ready to go. But there's no need for the fun to end. "Scan and Tan" offers a very special optional trip. Take the whole family to Disney World! The Disney package includes accomodations at the Caribbean Beach Hotel, hotel taxes, 4-day park admission, an economy car and airport transfers.

You can get more information by calling club headquarters at 1-800-423-1331 but be sure to book your reservations now to get these super low rates. Arrangements are being made by Sandy's Cruise World International, Inc., America's Premier Cruise Agency. Call Sue at 1-800-876-0146 for specific rates, dates and deadlines.



A $25.00 per person deposit is all that's needed to reserve your spot on the world's first Scan and Tan Cruise! Join us. We're looking forward to seeing you there!

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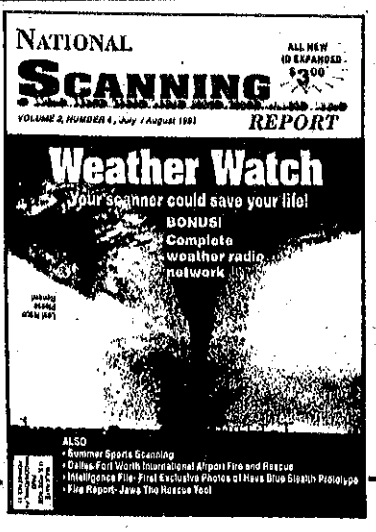
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For more information write to P.O. Box 360, Wagontown, PA 19376



We're Looking for a Few Good Men (And Women)

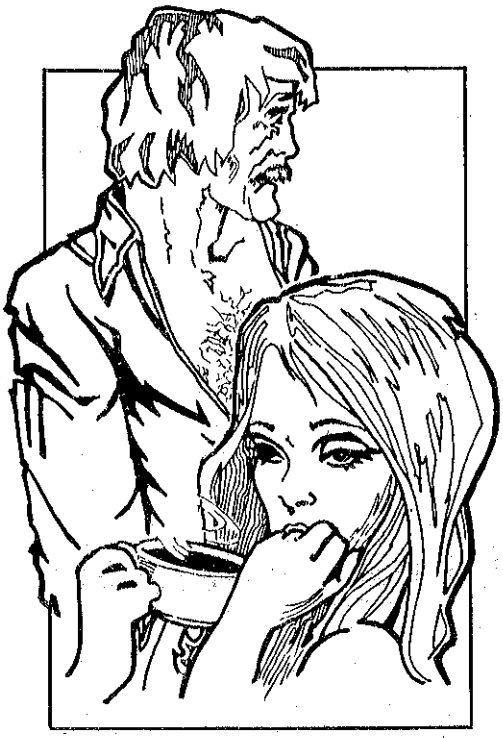
to write for National Scanning Report. Send a self-addressed, stamped envelope for details to NSR, P.O. Box 360, Wagontown, PA 19376.



POLICE Beat

By Wayne Heinen

Monitoring the Red Light District



Many communities have areas commonly known as"Red Light Districts". Usually they are run down and infested with many types of crime. These areas are also the place where prostitutes ply their trade. The scanning action can be rather intense when the Vice Squad decides to crack down on them.

Vice squads generally run two distinct types of operations. The first is a sting on the prostitutes themselves and the second is a sting on the "Johns", the prostitute's potential customers.

You'll find these communications on the department's tactical or car to car channels. Most use a car to car or some kind of repeater channel because the activity is generally spread out over an area larger than the simplex hand held transceivers can cover. When a special operation like this takes place, the channel is usually closed to other traffic. You can set the scanner on manual and follow the entire operation.

You might think that this would be a late night operation, but not so! I monitored these special operations from my office about three miles from the scene. All the operations that I have observed have taken place between 10 AM and 6 PM and were on just about every day of the week, including Sunday. Many monitors don't regularly monitor the car to car or the information channels because the usual traffic is driver's license and license plate clearances. It's rather boring unless you happen to hear the name of someone you know.

The key to a special activity on a channel is usually given on the main dispatch channel or channels depending on the size of your city. "Attention all officers, Channel three is closed to normal operations, please use Channel four for car to car". This announcement alerted me to the upcoming event. In my area the channel three designation is car to car and channel four is for clearances. After switching to channel three and listening a few minutes, I was able to determine the type of operation.

When the Vice squad is targetting the prostitutes themselves, you'll here at least three to five officers working the channel. The "decoy" is an officer in plain clothes who observes a known or suspected prostitute in the area. At quite some distance from the subject, the officer will cease all transmissions and begin using prearranged signals to his fellow officers. A running commentary as to the decoy's progress is kept up by one or two plain clothed observers. As the decoy was approaching the subject I heard a transmission "He's headed toward the skinny blonde and he's gonna give her the line. He's brushed his leg. So keep an eye on them" The line, of course, is the proposition to have sex for money. "brushed his leg" is the hand signal where the officer has indicated that as he walked by the subject he'd be

doing just that.

All was quiet for a few minutes then "He's got his cap off and it's in his right pocket, we got a live one so get the motel crew ready". The signal was prearranged and the woman had taken the bait. Their progress back to the motel was monitored the entire way. As they entered the room, the decoy was whisked out of sight and the uniformed officers proceeded to arrest the suspect on prostitution charges. The arresting officer radioed dispatch for a case number and had a computer search done looking for possible outstanding warrants on the suspect. The original decoy now became an observer and one of the two other observers became the next decoy... and on it went.

The second type of operation is the arrest of suspected customers. The police figure that one way to clean up an area for awhile is to cut down on the number of customers available to the prostitutes. Most of the suspects arrested received summons for "Soliciting for prostitution" and are even more upset when the local PD has their names published in the papers after their convictions!

In these operations the decoys are female officers who dress and "act the part". Stationing themselves on the main street where they're most likely to be approached. They wait around to be asked. Once asked they need to have some form of proof that the suspect is actively seeking her services. Generally she will ask to see the amount of money being discussed. Once the money is shown, she leads the suspect back to the motel, or in the one case I observed, to an alley where the uniformed officers arrest the suspect immediately and get the decoy out of sight. Many operations involving the female officers are extremely dangerous. They don't know when a suspected customer could turn out to be a violent rapist. In many jurisdictions, including the one I observed, the decoys are "bugged" with low power cordless microphones. These generally operate in the area near 170 mHz and unless you are very close to the operation will be virtually impossible to hear because of the very low power.

The conversations between the decoy and the potential "customer" are monitored so the entire operation force can move in to protect the decoy if needed. The observers spot the customers and both marked and unmarked cars are stationed at key locations, in case the suspect attempts to flee. Many times the decoy will turn down the offered amount, but the suspect has still committed the crime by propositioning her in the first place. As he drives off, the observers tail him until a marked unit can stop him and make the arrest. The afternoon that I was monitoring, one suspect attempted to run down the uniformed officer and was chased a few miles before being apprehended. After a check of the central computer records, it turned out that he was wanted on numerous outstanding warrants.

These special sting operations can provide literally hours of great scanner listening and if your inclined to tape your scanning will make a great additions to your tape collection. So remember to listen for the key words on your dispatch channel "Attention all officers, Channel 3 is closed to normal operations"!

TUNE IN ON TELEPHONE CALLS by Tom Kneitel



People will talk about almost anything when they're on the phone – and not have the foggiest notion that people are listening. And people are listening – if they have a scanner.

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FIRE Report

Hazardous Materials

"Hey Joe! What's that funny smell?"

"I don't know, I've been trying to figure it out. Let's look around some more."

(Five Minutes Later).....

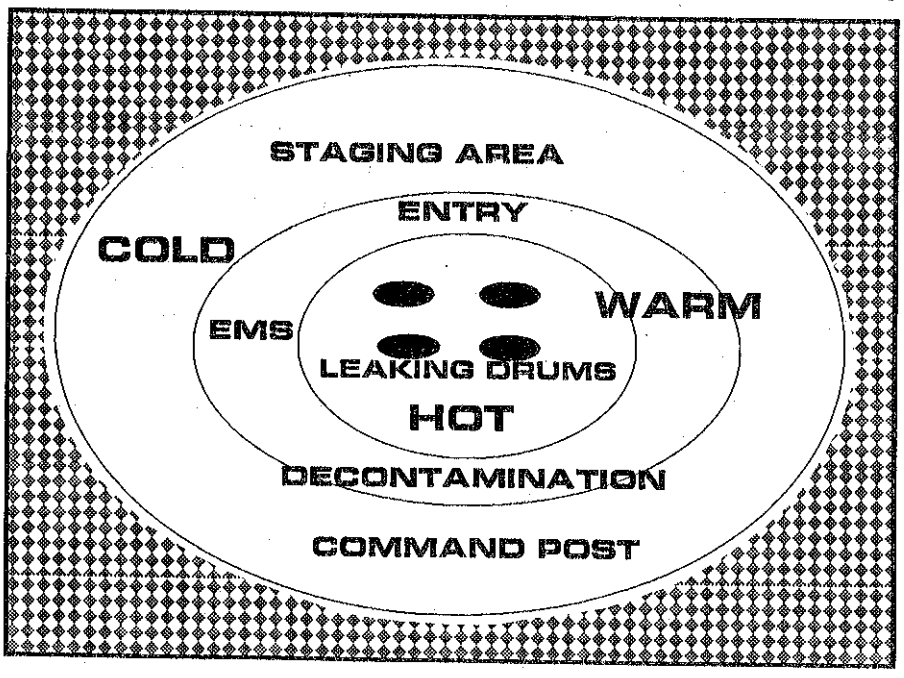
"Holy smokes, Joe! That tanker of chlorine at the dock is leaking like crazy! Let's get out of here (cough, cough) and call the fire department!"

Hazardous materials incidents are one of the fastest growing problems for the fire department. There is an enormous amount of hazardous chemicals out there, being transported by rail and truck, used in hundreds of manufacturing processes and laboratories, and even found in your garage or basement. They can range from household items as common as a gallon of laundry bleach, to drums of chemicals such as organic peroxide (an oxidizer, which when it leaks can crystallize, form a cloud, and then explode from heat or contamination), to large railroad tank cars full of hydrocyanic acid (also known as hydrogen cyanide....- remember Bhopal, India?).

Hazardous materials must, of course, be handled very delicately. Usually, when first advised of the incident by the reporting agency (railroad, police, or whomever), the fire department will send a standard pre-arranged assignment. This often consists of a fire assignment (two engines, a ladder, and a Battalion Chief), with the addition of a heavy rescue, EMS units, and a special hazardous materials truck which carries entry suits, containment dikes and drums, and various other devices for handling hazardous materials. This assignment can vary, depending upon the department, and is usually added to or changed after arrival on the scene and the hazard level has been assessed.

After arrival on the scene, the first order of business is to treat anyone in the immediate area who may have been affected, and to determine the hazardous material involved. After this has been accomplished, zones are established according to the threat level: the hot zone is the area where the hazardous materials are and/or the contamination occurred; the warm zone is where the entry teams, decontamination unit, and EMS unit are stationed; and the cold zone is the "safe" area where the command post and staging area are located (and the news media, if they are allowed anywhere near the scene).

While the zones are being



established and equipment set up, the command post is gathering every bit of useful information possible regarding the hazardous material(s) involved; the necessary equipment is then obtained from the hazmat truck. The entry team then begins their preparations; while this is underway, they are fully briefed on the material and the way they should handle it. Before putting on their entry suits, each member of the team has his or her vital signs checked and noted down for later comparison. They then put on their breathing apparatus and entry suits and enter the "hot" zone. While there, they contain the leak or spill, and place spilled material in containment drums, or place absorbent "pigs" to soak up the spill; the pigs are then placed in containment drums for disposal.

A very important piece of information obtained by the command post, and updated regularly during the incident, is current weather conditions such as temperature, wind direction and speed, humidity, and so on. These are very important, as different chemicals react differently to weather. Some will form a cloud if the temperature is above or below a certain point, others will ignite if exposed to higher temperatures, and so on. Wind direction and speed determine where a vapor cloud will go, and humidity level determines how close to the ground a vapor cloud will stay.

Sometimes, there is simply no way to contain a leaking hazardous material other than to create a dike to contain all the material that leaks. In this case, the material is left leaking and is disposed of later; sometimes, it is intentionally ignited to burn it off rapidly, and reduce the danger to the surrounding area.

After the entry team leaves the hot zone, they return to the warm zone, where there is a decontamination point set up. At this point, each member of the decontamination team is thoroughly washed off (three times). The runoff water is contained and disposed of with the leaking materials (one of the best devices for containing this water is a plastic "kiddie" pool, disposable and available for a few dollars at any department store). The entry suits are also disposed of and replaced, since it would not be safe to re-use them. After being decontaminated, the members of the team have their vital signs checked again, and the results are compared with the pre-entry vital signs to check for any possible exposure to the hazardous materials.

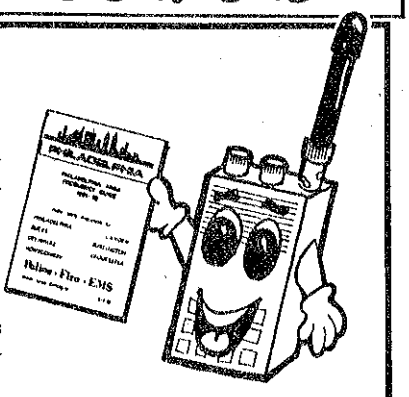
After the leak has been contained, the agency or company that caused or is otherwise responsible for the leak calls in a disposal firm, who collects and safely disposes of everything. Often, in these days of tight budgets, the fire department will send the responsible party a bill for all materials used in containment of the leak, and any necessary overtime, and so on.

If your local fire department has a hazmat incident in progress, try listening on the local fireground and mutual aid frequencies; most of the activity will probably take place on these frequencies. Incident command will almost certainly be used at a hazmat incident, thus making your monitoring that much easier and more interesting.

As you can see, hazardous materials are no fun, and containing them when they leak is a dangerous, expensive, and time-consuming affair. Listening to them on the radio, however, can be a fascinating way to pass the time. Until next time.

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Send check or more order for $12.95 postapaid to Louis Campagna, 8001 Castor Ave., #143-NS, Phila., PA 19152-2701. (PA res. add 6% sales tax.).



Scanning the Skies

Jumpers Away!!!

Folks that toss themselves out the hatches of perfectly good working airplanes have always intrigued me...or at least their communications have. I recently ran across jump planes working on 123.3 and it started me thinking about what other freqs are used.

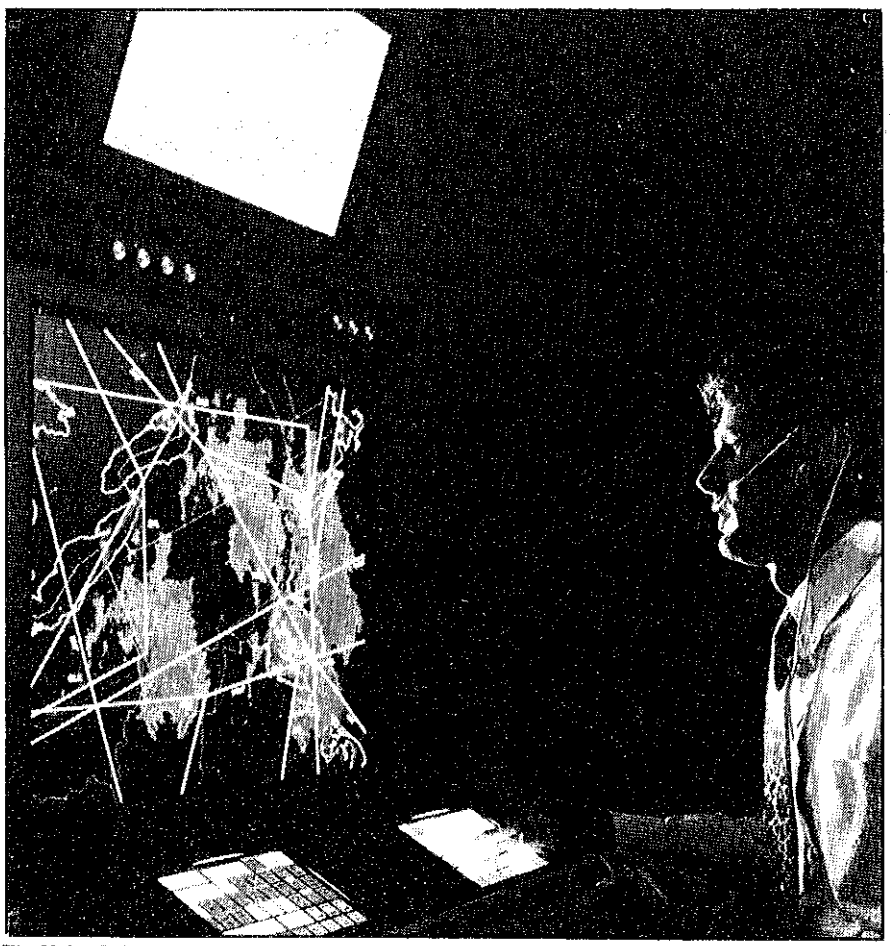
According to skydivers and pilots I have talked to, operations are conducted in coordination with the local FAA through regular air traffic control channels. Find out where jumps are occurring and listen in to the Approach/Departure or Center frequency responsible for that area. If jumps are taking place over airports, listen in to the airport Tower frequency, or the Common Traffic Advisory Frequency (CTAF) if no Tower is in operation (122--124 MHz.)

For jump plane to jump plane communications, try 122.75, 123.4, 123.45, 123.5 and look between 128.825--132.000. If the jumpers have radios with them, you might just be treated to a radio ride!

Aircraft Call Signs

Almost every transmission made by a pilot will include the identifier or call sign of the airplane he's flying. This series of numbers is used to instantly inform air traffic controllers of who's speaking and by looking up the flight plan or data sheet listed under that call sign, the controller will be privy to all sorts of information about the flight. To a controller an aircraft call sign serves as a means of contacting a particular airplane over the radio.

All civilian aircraft have what are known as tail numbers. Beginning with the letter "N," which indicates an aircraft of United States registry, the tail number consists of between two and five letter/number combinations painted on the tail section of the aircraft. These numbers appear on all official aircraft documents such as the airworthiness certificate and travel with the aircraft through-



The Voice Switching and Control System designed by Harris Corp. is part of the FAA's major plan to modernize the entire US air traffic control system. The state-of-the-art VSCS will provide critical voice communications at FAA air route traffic control centers. VSCS touch screens, shown here, will be integrated into a next-generation Advanced Automation System console from IBM.

out its life.

These same tail numbers are used in radio communications to identify an aircraft. If you climb into an airplane with 2545B on its tail section, you'll be using Two Five Four Five Bravo as a radio call sign. Numbers are pronounced individually, and letters follow the phonetic alphabet (Alpha, Bravo, Charlie, Delta, etc.) Preceding the tail numbers in radio communications is the aircraft type name. Cessna, Cherokee, King Air, Learjet, North American, Piper, etc.

Military aircraft often use special call signs related to unit, squadron or mission such as Bat, Gunslinger, Top Gun, or Shooter followed by a number or numbers. Commercial airliners or commuter services use their company name or a derivative, followed by flight number.

What all this means to the monitor is that there will be quite a few numbers thrown around during the course of a radio transmission. Generally, on first contact with air traffic control, a pilot will say the agency name, followed by his callsign and then proceed with altitude/ airspeed/ location information. ("Los Angeles Center, Piper Two Eight One Golf Tango...) The controller will respond with the a full call sign readback, but thereafter the call sign is shortened to use only the last three numbers/letters for brevity.

MCI and Harris Corp. Win ATC Contracts

MCI Telecommunications and the Harris Corporation have both won contracts to upgrade existing FAA communications systems. MCI will supply the FAA with better communications between air traffic control facilities and between pilots and controllers. This upgrade is expected to take three years for completion.

Harris Corporation of Melbourne, Florida will replace aging leased communications systems already being used with the Voice Switching and Control System (VSCS), providing a computer-controlled voice system for communications between controllers and flight crews. This system is expected to be installed at all 22 air route traffic control centers, and New York terminal radar approach control facility (RAPCON.)

Ballooning Around

Last issue we talked about balloon communications. I came across the following US frequencies licensed to balloonists, obtained from Bob Parnass and Jeff C. Glover via BBS download:

American Balloon	123.3000	KN7685
	123.5000	KN7685
Balloon Adventure	151.6250	KA89677
Balloon Adventures	123.3000	KD9559
	123.5000	KD9559
Balloon Depot Inc.	151.6250	KB28682
	464.5500	KB87546
Balloon Fantasies	151.9250	
	151.9550	
Balloon Media LTD	151.6250	KA79512
Balloon Promotions	123.3000	KU6011
Balloonatics Inc	151.6250	KB20846
Balloons Aloft	123.3000	WNQ5
	123.5000	WNQ5
Balloons of Medina	151.9250	KB83557
Great Lakes Bal.	464.5500	KB31135
Hot Air Corps Bal.	123.3000	KX7651
	123.5000	KX7651
Hot Air Hang Ups	151.6250	KA62685
Hot Air Inc	151.6250	KJ5265
Token Creek Bal.	151.6250	KD23142
Wicker Basket Bal.	151.6550	KB38764
Windy City Balloon	151.6250	KD47160
West Coast Balloon	461.300	WNST812
Bal. Above The Vly	469.100	WNJD440
Skysurfer Balloon	461.300	WNHQ377
Skysurfer Balloon	466.300	WNHQ377
Amer. Balloon Adv.	463.775	WNRC509
Amer. Balloon Adv.	468.775	WNRC509
Balloon Aviation	151.655	KNFV321
Napa Valley Bal.	461.925	WNST468
Napa Valley Bal.	463.650	KNDD893
Bal. Above The Vly	464.100	WNJD440
Napa Valley Bal.	466.925	WNST468
Napa Valley Bal.	468.650	KNDD893
Vista Balloon Adv.	151.625	KD46553
Vista Balloon Adv.	154.600	KD46553T
Balloon Federation	151.625	WNUP987

The July/August issue was GREAT as usual.

--Richard M. Boehm, No. Massapequa, NY

Completely Updated Second Edition

Aeronautical Frequency Directory

Throughly revised alphabetical listings by state of civilian and military air frequencies. Includes the new 136 to 137 MHz licenses for ARINC. Expanded introductory section includes ARINC VHF map, on ground freqs, Air Carrier user info, new 800 MHz airport systems licenses, HF system coverage. FAA coverage broadened as well. Crammmed with info. Available July 31st. Just $24.95 plus $3.50 UPS or $2.00 USPS. DX Radio Supply, PO Box 360, Wagontown, PA 19376 or call 215-273-7823

RAILROAD RADIO

Gary L. Sturm

The Maintenance of Way Channel

Let's talk about the railroads' use of the Maintenance of Way channel. You may feel that I have misspelled the word "way" and that it should be "weigh." We're not talking about the maintenance of weigh as in the care and upkeep of a fine Toledo (Honest Weight) Scale, but maintenance of "way" as in right-of-way or property of the railroad.

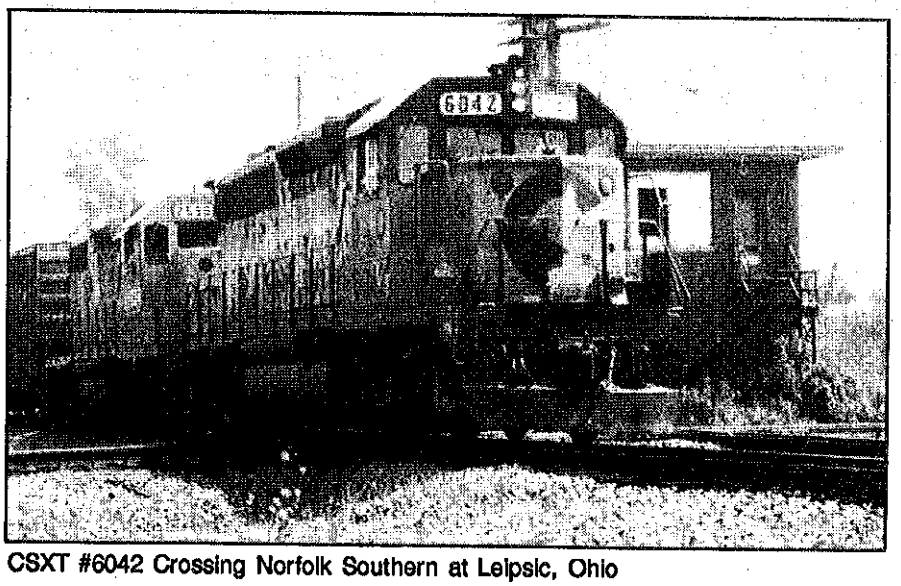
Many railroads have a special channel designated as the "MofW" channel just for the conversations of the track workers. No matter if it is the ATSF (161.010), Long Island (160.395), or the Terminal RR Association of St. Louis (161.310), many railroads have a channel designated only for this use.

Listening in can be quite intriguing and the chatter heard is not always the sublime. Ever wait on a train to get some good action shots, not to have it come on time? Maybe it's because there is some track work, or possibly a derailment on the railroad.

A scanner can provide the information needed to know when trains are close by listening to the MofW channel. Track warrants will be given by workers providing slow orders for trains. Track workers can be heard calling for parts to make repairs and railroads like the Union Pacific even use their maintenance channel as a mobile telephone (160.605/161.025) system. This allows the railroad workers to call for help and even order pizzas for the workers!

Not all railroads have the MofW channel though. Many just use their road or general operating channels for the discussions of the trackside workers. Other rail systems that have MofW channels are transit systems, such as Bay Area Rapid Transit (43.78) in San Francisco. Even Disney World (462.650) has a maintenance channel. Large Industrial concerns, such as the Bethlehem Steel plant at Burns Harbor, Indiana, have their own rail maintenance channel (154.570).

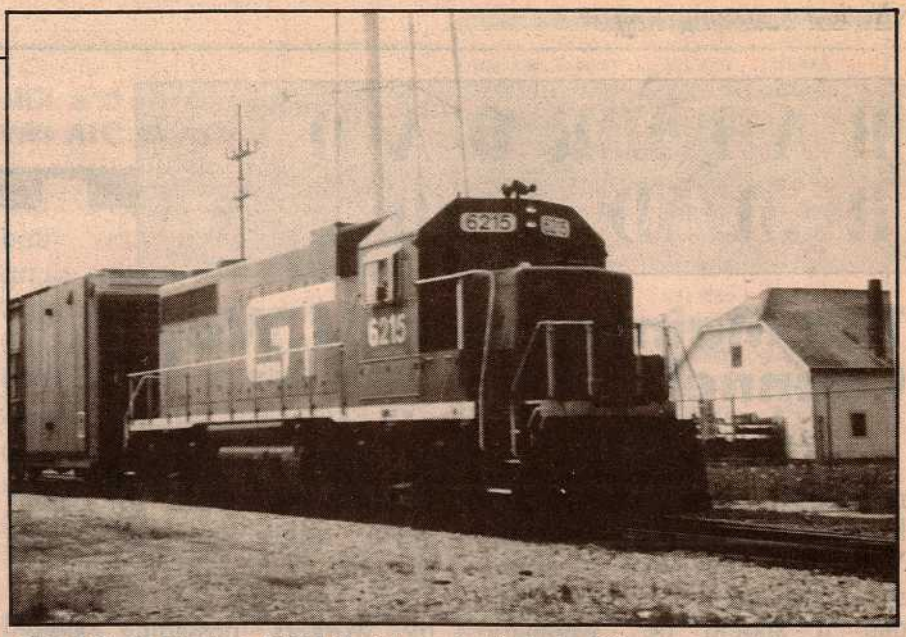
Derailments are of major concern and interest to everyone. Toxic chemicals are commonly carried by railroads



CSXT #6042 Crossing Norfolk Southern at Leipsic, Ohio

today, and the chatter on the radio can be very interesting when a derailment occurs. Railroaders can be heard dispatching crews to clean up spills and total train derailments. The MofW channel combined with the road and dispatcher channels provide the most insight into what goes on at a derailment site.

Conrail's MofW channel is quite busy during normal working hours, as are most others. Systemwide networks (161.130/160.710) allow the workers to call their supervisor or have repair parts dispatched to their location. Much of this traffic ceases after 4 pm in the afternoon when working hours end, but special occurrences may bring interesting conversations during the evening hours.



Grand Trunk Western #6215 Northbound at Leipsic, Ohio

The next time you are awaiting your commuter train, try listening in to the Maintenance of Way channel used by your local transit system to see what has happened to your train. Railfans can "find" trains by listening to the conversations of the trackside workers.

Next time we'll talk about the yard channel and how its use differs among railroads.



Scanning the Railroads

From mile-long freight trains to Amtrak's shiny silver passenger cars, railroading is great listening.

The Compendium of American Railroad Frequencies is the hottest book on the subject. Now in an all-new 11th edition, there are over 200 pages containing some 5,500 listings from around the country. Also included are transit systems, museums, tourist operations, and industrial railroads.

Information is arranged by railroad. Each listing contains frequencies, the states in which the railroad operates, location of the facility, frequency usage and more.

A new feature is the metropolitan listing in frequency order.

Now available from DX Radio Supply for $14.95 plus 1.50 book rate or 3.00 UPS. Send your check or Mastercard/VISA number, expiry date and signature to P.O. Box 360, Wagontown, PA 19376 or call the 24-hour order recorder at 215-273-7823.

AMTRAK-Chicago

Amtrak uses the road channels of the host railroads while in transit on their trackage.

160.365 Amtrak/Union Station Police
161.205 Police-Mutual Aid
160.305 Commissary and Terminal Road
160.740 Shops
161.265 Car Department
161.325 MofW and Signal Department

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FEDERAL MONITORING

Ted Jones

Active UHF Frequencies from Air Force One

I don't know about you, but I've been intrigued lately by the communications of Air Force One. The President's airplane, a highly modified Boeing 747-400, has taken our nation's top dog on campaign trips from one end of the US to the other this year. A recent trip to San Diego and to Los Angeles a few months later by Air Force One gave me an excellent opportunity to tune in the Big Guy.

First of all, if you thought hearing Presidential communications was difficult and only for "experts," think again. All you need is a scanner capable of both UHF and UHF air reception, and an outdoor antenna for best results.

Though rampant rumor has been running for years with the news that Air Force One communications were to be handled by satellite, I found that UHF frequencies were still active. The most common type of Air Force One communications you will hear on your scanner will be telephone patches through the White House Communications Agency (call sign CROWN) via whatever local communications center is handy. Senators and Presidential Staff aboard the aircraft make liberal use of these patches. I have yet to hear the President himself, but others have when time or the type of message conspired against encryption.

The frequencies I'm about to discuss are all confirmed by me and all active as of mid-1992. 415.700 MHz has been called "Nationwide" by the pilot of Air Force One during numerous radio contacts. Often referred to as a downlink frequency, carrying only audio from the air-



The President's airplane, Air Force One. Photo courtesy of the White House

craft, this channel has carried both sides of the conversation every time I've listened, so don't be fooled. 336.000, 336.800, 305.550, 390.000, and 397.050 are part of the NIGHTWATCH VIP communications system (also known as Alpha Bravo, Orderwire, Autovon and Wideband.) There are other frequencies in the system, but these five see the lion's share of the traffic.

On any of these frequencies, the presence of an open channel, often with the unmistakable "inside an airplane" sound, alerts you to further communications. Stand by! Special Air Mission (SAM) flights, the Vice President and various Heads of State are also heard on this system, so watch your newspaper for news of upcoming visits.

U.S. BORDER PATROL

"Any unit in eighty-four area, one hit, 1683 Port One. Any unit responding?"

"Alpha 24 responding."

Communications like this one take place at all hours of the day and night along the US/Mexico border as strategically placed border intrusion alarms are activated. These alarms alert agents to possible illegal aliens crossing over and spare the manpower that would be needed for agents to patrol the "fence."

The US Border Patrol sees action all across our country, but the highest concentrations of activity occur along the borders of the United States and Mexico and the United States and Canada. For obvious reasons, the US/Mexico border is most heavily patrolled and sees a great amount of illegal cross-border traffic.

BP uses sworn federal law enforcement officers known as agents along with the help of vehicles, motorcycles, helicopters, canines, boats, snow-mobiles, skis and good, old fashioned foot work to patrol its domain. There are four main Border Patrol regions on the organizational chart: Northern, Western, Eastern and Southern and a total of 78 field offices (at last count.) The national office is headquartered in Washington, D.C.

Monitoring BP is not difficult, as most communications are not scrambled. Though this may vary from point to point across the country, you will find hours of good listening once you discover which frequencies are active in your area. The following list should get you started. Don't forget to pass along other BP frequencies, call signs, and codes to us here at Federal Monitoring. We'll give you credit and put it in the column for all to see.

...I just got my first copy of National Scanning Report. What a great publication! I'm eagerly awaiting the next issue

-- Jim Rinehart, Nashville, Tennessee

US Border Patrol Frequency List

162.825	Customs Liaison
162.850	Repeater
162.875	Repeater
162.900	Repeater Tactical
162.925	Customs Liaison
162.950	Repeater
162.975	Repeater
163.050	Simplex
163.100	Simplex
163.375	Simplex
163.550	Simplex
163.600	Repeater
163.625	Repeater Tactical
163.650	Repeater
163.675	Repeater Tactical
163.700	Repeater Tactical
163.725	Repeater Tactical
163.750	Repeater Undercover Ops
163.775	Repeater Tactical
165.825	Repeater Anti Smuggling Units
165.875	Repeater
165.900	Repeater/shared with Justice Dept.
165.925	Repeater/shared with FBI
165.975	Repeater
168.825	Repeater
168.850	Repeater
168.8625	Repeater
168.875	Repeater
168.900	Repeater
168.950	Repeater
168.975	Repeater
170.675	Simplex Tactical
170.700	Simplex Border Intrusion Alarms
170.750	Simplex Border Intrusion Alarms
413.600	Repeater/shared with Postal Inspectors
413.625	Repeater
413.675	Repeater
417.050	Repeater
418.850	Repeater
418.875	Repeater
418.975	Repeater

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Ask The Experts

Q: I recently got the chance to read a friend's copy of National Scanning Report. This intrigued me very much and I would like to enter the world of scanning. Could you advise me on an up-to-date beginner's book written for the layman that would help me? I would also like any advice you might have concerning the relative merits of scanners currently on the market.
– Paul E. Alexander, APO AE

A: Welcome to the world of scanning! We're sure that you'll spend many enjoyable hours behind your radio, no matter what model you choose. To assist you in making that decision, National Scanning Report evaluates a piece of equipment every issue. You may also find it helpful to contact one or more of the advertisers in this issue. All would be more than happy to help you find the right scanner for your needs. Look for an all new edition of National Scanning Report's "Citizen's Guide to Scanning" early in 1993. This soup-to-nuts book is designed to provide "hands on" information for everybody from the first-time listener to the seasoned vet. Your favorite radio store will probably be carrying it.

Q: I have a question concerning frequency counters I hope can be answered. I understand that a frequency counter can be placed near a transmitter to obtain an operating frequency, say, from a nearby police officer's handheld or car radio. There are several two-way towers in this area, but I don't know who owns them or their operating frequencies. Could I take a frequency counter to a transmitter/tower site and find what frequency/frequencies are being used at that location?
–Christopher Adams, Murray, Kentucky

A: Next to a subscription to National Scanning Report (sorry, that was a shameless "plug") a frequency counter is an accessory that should top every serious scanner listener's "must have" list. Yes, you could use a frequency counter to determine the frequency of the transmitter that you describe. It's important to note, however, that the effectiveness of a frequency counter varies with your distance from the transmitter and the transmitter power. For example, you'd have to get within a couple of feet of a mini-powered cordless telephone to determine its frequency. In other cases, the distance is considerably greater. In any case, getting the best frequency counter for your money will improve your success rate. We recommend Startek and suggest that you give them a call at 1-800-638-8050 or write 398 NE 38th St., Ft. Lauderdale, Florida 33334 for more information. They'll be happy to answer your questions.

Q: I am constantly hearing local police refer to "nationwide," especially when patrol units want to talk privately. Have you ever heard of this frequency? I am assuming that it is used around the country and not just here in Maine.
–Arthur Modeen, Maine



Norm Schrein, (left), is "Mr. Scanner." But who's the other guy?

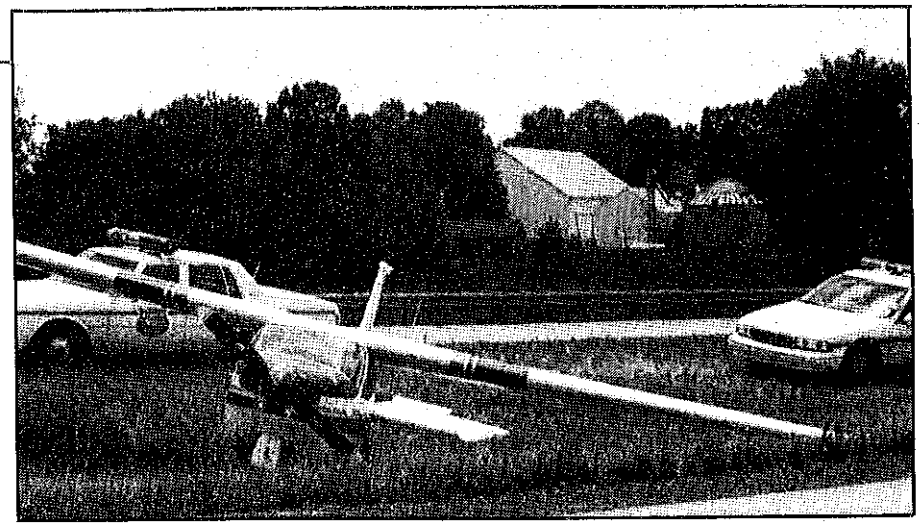
Meet Mr. Scanner at a Show Near You!

Sept. 19-20–Peoria, IL–Illinois State Convention
Sept.–Virginia Beach, VA–Tidewater Amateur Radio Convention, The Pavillion
Sept. 26-27–Louisville, KY–Great Lakes Division Convention
Oct. 2-4–Atlanta, GA –MT Convention, Omni Hotel
Oct. 3-4–Boxboro, MA–New England ARRL Convention, Host Hotel
Nov. 6-80–Houston, TX–Houston Ham-Com, Sheraton Crown Hotel
Nov. 14-15–Ft. Wayne, IN–Ft. Wayne Hamfest, Allen County Memorial Coloseum
Nov. 21-22–Tampa, FL–Florida State Convention, Florida State Fairgrounds
Jan. 7-9 1993–Las Vegas, NV–Winter CES Show, Las Vegas Convention Center

A: More than likely, when your police department says "switch to nationwide," they mean that the cars should move to 155.475 MHz. This frequency is specifically allocated for police to use no matter where in the country they are located. Some police departments use it for "private talk," others for department-to-department communications and still others for emergencies. If you've got the memory space in your scanner, this is one frequency that you should keep punched in.

Q: How can Roger West hear so many aeronautical disasters? It seems like he hears something spine-tingling every issue. What's his secret?
– Butch Highland (NY 04 NNC)
New York, New York

A: I'm sure that Roger will admit that a large part of his success is that he is lucky (as opposed to the people he is monitoring who are very unlucky). At the same time, I'm sure that his experience and knowledge of aeronautical frequencies and patience play a large role as well. The fact that Roger lives in Amery, Wisconsin, which is probably a hundred miles from the nearest stop sign, makes his accomplishments even more remarkable.



How does Roger do it?

Start your search for tragedy in the air by punching in the civilian aero emergency channels, 121.500 and 123.100 MHz. Try also 243.000 and 282.800 MHz. Search and rescue operations are between 123.100 and 132.125 MHz. Regular Air Traffic Control frequency ranges probably wouldn't be a bad idea either: 118.000-121.400, 123.675- 128.800 and 132.025-135.795 MHz.

Q: I own a BC 100XLT and recently purchased a Radio Shack #20-009 Lapel/Collar Speaker to use with my scanner. However, the volume is no louder than the stock earphone. Is there a mini audio amp that I could build to fit inside the Radio Shack unit?
– R. Crowell,
Somerset, New Jersey

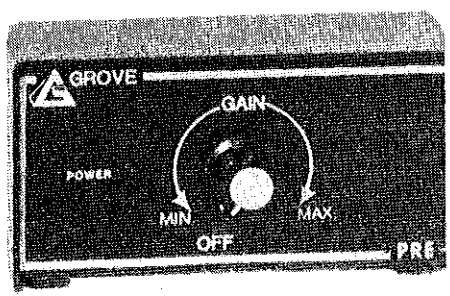
A: We tried the #20-009 Lapel/Collar Speaker with a Realistic PRO-43 and it worked like a champ. However, in some scanners, there is apparently a dropping resistor that is shunted into the audio circuit when you plug an earphone into the jack. The purpose of this resistor is to lower the volume of the scanner sufficiently so that when you plug in the earphone, you do not blast out the earphone and/or your ear. You could jumper the resistor out of the circuit (solder a piece of wire from one lead of the resistor to the other). If you're not comfortable with doing that kind of work -- and it may void your warranty -- we know that the folk at Radio Shack would be happy to either refund your money or apply the purchase price toward an amplified speaker.

Send in your questions to Ask the Experts, PO Box 360, Wagontown, PA 19376.

PRE-4
Scanner Booster

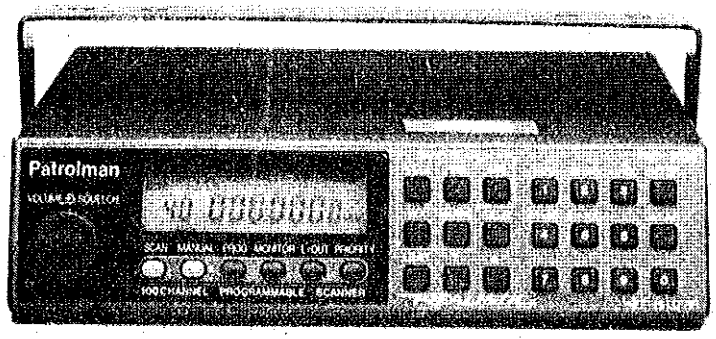
The PRE-4 is actually a powerful signal preamplifier that can add a full 20 dB gain to your scanner on frequencies from 25 to 1300 MHz. You adjust the gain from the front panel and the rear panel has two antenna jacks allowing for simultaneous operation of two scanners. A 120VAC/12VDC adapter included. Can be used with mobile or base stations, with or without outside antenna.

Its available from DX Radio Supply, PO Box 360, Wagontown, PA 19376 for $59.95 plus $4 UPS. An optional scanner interconnect kit is $12.95. Use MC/Visa. Call 24 hours 215 273-7823. (Not recommended for urban areas.)



Cranks Up the Volume on Faint Signals!

New Products Preview



PRO-2026 Mobile Scanner

For scanner listeners on the go, Radio Shack has introduced a scanner specifically designed for mobile use. Called the PRO-2026, it does not include such things as AC power adapter, desk tilt bracket or tape recorder jack. It does, however, come with a mounting bracket, enough memory to to store 100 of your favorite frequencies (in 5 banks of 20 channels each), convenient one-touch Service Search that automatically seeks out the most often used frequences allocated to police, fire, aircraft, weather or marine bands (no need to program the frequencies) and nice coverage: 29 to 54 MHz, 108 to 174 MHz, 406 to 512 MHz and 806 to 956 MHz (minus cellular phone frequencies).

Scan speed is 14 channels per second; search speed is about 19 channels per second. The PRO-2026 measures 1 5/8 x 6 5/16 x 7 3/8 inches and weighs in at 2 lbs, 3 oz.

The Realistic PRO-2026 retails for $199.95 and is available at Radio Shack stores nationwide.

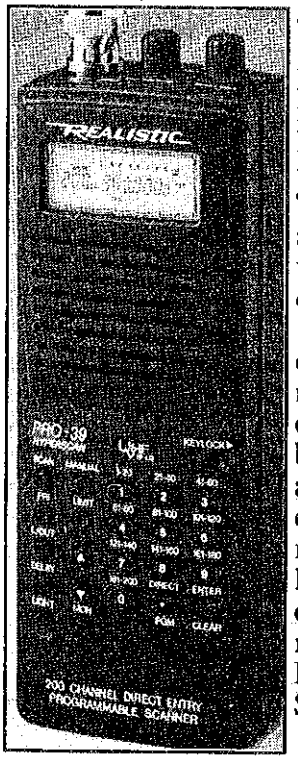
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New Radio Shack Handheld

Radio Shack will shortly be introducing their Realistic PRO-39 handheld scanner. The radio will feature 200 channel frequency storage in 10 banks, 800 MHz coverage, HyperScan search and scan, a 10 channel monitor bank,priority,lockout, scan-delay, memory backup circuit, belt clip, detachable flex antenna, and earphone jack.

Measurements for the PRO-39 are 5 1/4 x 2 3/4 x 1 5/8 inches. The unit operates on 6 "AA" or rechargeable batteries or AC or DC. Anticipated retail price will be $299.95.

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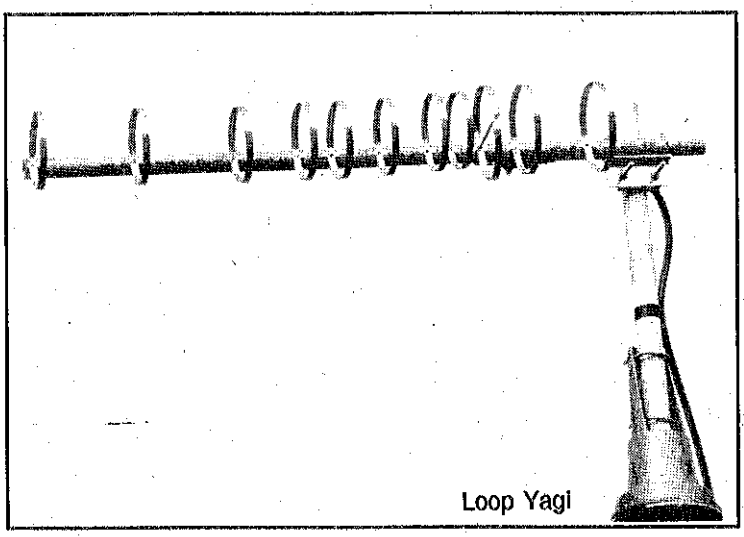
New Scanner Chargers from MetroWest

MetroWest has introduced its new Pro Power 3 scanner battery chargers. The new charger stand retains the styling and operational features of the well-known Pro Power II model and has added the ability to accomodate either Nickel Cadmium (NiCad) or the new Nickel-Metal-Hydride (NMH) batteries. Nickel-Metal-Hydride batteries, also available from MetroWest in the AA size, offer nearly twice the run time of typical NiCad cells.

Charge time on the Pro Power 3 has been reduced to 11 hours for NiCads; the NMH batteries charge in only 7. The charger also allows a half recharge cycle and uses a 2-color LED to display charging status.

The new Pro Power 3 charger for most scanners will be available in early October and will be priced between $49 and $56. Upgrades for owners of Pro Power II models well be available later in he year. To order or for more information, write to MetroWest at 822 N. Spring Ave., La Grange

When You Contact an Advertiser or Company Listed Here...
Tell Them You Heard About it in
National Scanning Report


Loop Yagi

Park, Illinois 60525 or call 708-354-2125.

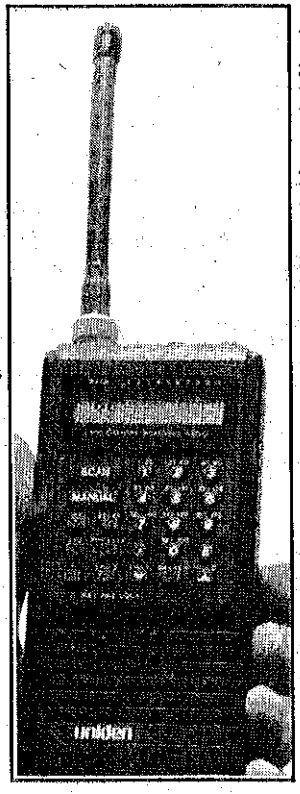
800 MHz Antennas

If you find yourself spending a lot of time on the 800 MHz band, MAX System Antennas has introduced two antennas that you're going to want to hear about.

The most powerful antenna, called the Loop Yagi, is designed for outside mounting and looks like something out of the space program. It's 11 elements are designed to haul in 800 MHz signals from long distances with high gain. The Loop Yagi is $75.00 plus $4.00 for shipping.

The tiny Stinger antenna is designed to replace the stock antenna on your handheld and to provide superior reception in a compact package at an affordable price: $7.95 plus $4.00 shipping.

You can order either the Loop Yagi or the Stinger from Cellular Security Group, 4 Gerring Road, Gloucester, MA 01930 or call toll-free 1-800-487-7539. Please tell them that you heard about their antennas in National Scanning Report.


The Stinger

Aero Monitoring Excitement

Few scanner frequencies are as exciting as the aero bands. From the daily to-and-fro at airports around the country to the drama of a Boing 747 in trouble at 35,000 feet, the action can be riveting.

Laura Quarantiello, editor of National Scanning Report's popular "Scanning the Skies" column and herself a licensed pilot, has put together a complete guide to monitoring aeronautical communications. Called "Airwaves," the book is a big 8 1/2 x 11 inch format that covers virtually everything from takeoff to landing. You'll learn which frequency ranges to scan for the hottest listening, discover emergency and search-and-rescue channels, learn what it's like to fly one of the big birds and how to monitor them like a pro.



Laura Quatantiello's "Airwaves" is available from DX Radio Supply, P.O. Box 360, Wagontown, PA 19376 or call 215-273-7823 24 hours a day. The price is $17.95 plus 2.00 book rate or 3.50 UPS. It ships in October.

Chicagoland Scanner Directory

If you live in Chicagoland -- Cook, DuPage and Lake counties -- you'll want to check out Erickson Communications new frequency directory. The almost 200 page book covers everything



When You Contact an Advertiser or Company Listed Here...
Tell Them You Heard About it in National Scanning Report

from aircraft, amateur radio and buses to business radio services, federal government, railroads, marine radio, news media -- even veterinarians and funeral directors -- as well as the standard police, fire and emergency medical frequencies. Arranged by service and location, there is also an alphabetical cross reference for looking up specific radio users.

Chicagoland Scanner Radio Listings is a comprehensive frequency directory that should provide locals with plenty of new frequencies -- enough to keep them glued to their scanners at least through the spring.

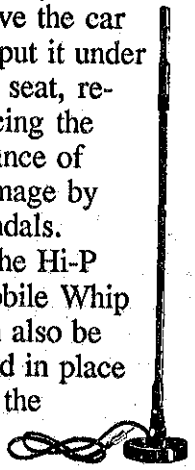
You can get your copy of the directory by calling Erickson at 1-800-621-5802 or by writing to them at 5456 N. Milwaukee Ave., Chicago, Illinois 60630. The price is $21.65 including shipping and sales tax.

The High Performance Mobile Whip

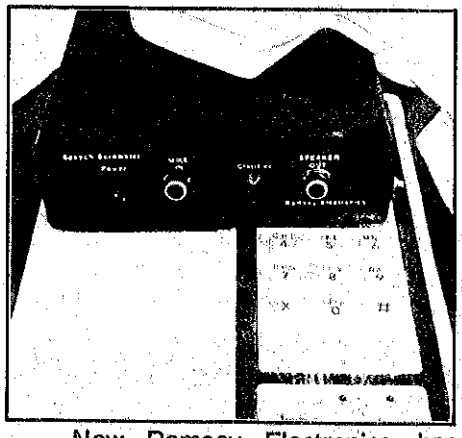
The DX Radio Supply "Hi-P Mobile Whip" is a sleek, black, 24" fiberglass antenna mounted on a rock-solid magnetic base. Tested to withstand interstate highway speeds, it covers a wide range of frequencies from 30 to 960 MHz. Coverage includes the 30-50 MHz low band, 88-108 MHz FM broadcast, 118-136 MHz aircraft, 136-174 MHz high band, 225-400 MHz military aircraft, 406-512 MHz UHF land mobile and 806-960 MHz police and cellular phone bands.

Best of all, the "Hi-P Mobile Whip" makes mobile scanning a breeze. The 12 foot coax (included) means no stretching to get to your scanner. And because it's a magnet mount, it goes on easy and comes off easy. Take it with you when you leave the car or put it under the seat, reducing the chance of damage by vandals.

The Hi-P Mobile Whip can also be used in place of the



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Ramsey Electronics SS-7 Speech Scrambling System

Have you ever listened to your local police on your scanner when suddenly, everyone sounded like Donald Duck? It's not really Donald, but proably a simple form of scrambling known as speech inversion. Although listening to such speech is difficult and annoying, it's not impossible.

Now Ramsey Electronics has introduced the SS-7 Speech Scrambling System. It's a complete two-way speech scrambler and de-scrambler with inputs and outputs for phone, two-way radio and tape recorder. It is designed to provide total privacy for communications or recorded memos.

The user should know that there are regulations regarding the interception and de-scrambling of transmissions employing speech conversion.

The Ramsey SS-7 Speech Scrambling System comes in kit form and operates on 9 volts DC. Contact Ramsey Electronics, 793 Canning Parkway, Victor, NY 14564, or call 716-924-4560. Use Visa, Mastercard or American Express. Cost of the kit is $29.95 plus $3.75 for shipping.

stock whip antenna for indoor use or on a balcony or windowsill) in situations where an outdoor antenna like the Scantenna is not allowed or practical.

The DX Radio Supply "Hi-P Mobile Whip" comes with both Motorola and BNC connector and is available for only $49.95 plus $4.00 UPS ($7.50 UPS 2nd Day). If you already have a 3/8" x 24 TPI threaded mount, the whip (only) is available for just $24.95 plus $3.00 UPS (6.00 UPS 2nd Day). Send your check or money order to DX Radio Supply, P.O. Box 360, Wagontown, PA 19376 or use your Mastercard or Visa and call 215-273-7823 twenty four hours.



Bringing DC Indoors

Some scanners can only be powered by 12 volts. They don't come with an AC adapter that plugs into the wall. The new Realistic PRO-2026 mobile scanner (see previous page) is just one example.

You may find, however, that you don't want to limit such an excellent scanner to the car or truck. If you take the radio indoors with you as an anti-theft measure, you may as well put it to use. But where can you find a good source of 12 volt DC power indoors? The answer is the Daiwa PS50T. A multi-purpose power supply, it is excellent for use with handheld and mobile scanners or anytime you need 12 volt DC.

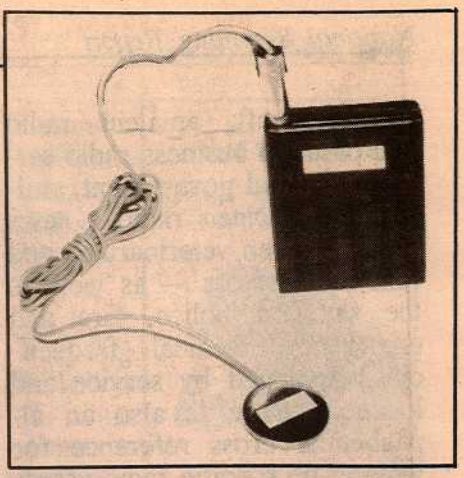
The Daiwa PS50T is available for just $49.95. For the dealer nearest you, contact Electronic Distributors Corp. at 703-938-8105 or write 325 Mill Street, Vienna, Virginia 22180 for more information. Mention that you learned about the PS50T in National Scanning Report, please.

Micro Ear Hears All

Micro Ear is billed as a "new audio breakthrough" that allows you to hear whispers through steel doors, walls or windows.

An extremely sensitive Sound Sensor disk ($19.95) is attached to a door, wall or window (or practically anywhere). The Sound Sensor is then hooked to a transmitter ($89.95) that broadcasts the Sound Sensor's signals for a quarter of a mile. You then use your scanner to pick up the signal.

The Micro Ear comes with a wide range of optional accessories including the M-1201 amplifier ($69.95),



used to monitor the Sound Sensor Disc with headphones, speaker, or tape recorder. For those who do not have a scanner, an optional receiver can also be purchased ($75.00).

To order, send a money order or cashier's check (no personal checks) to Iliadis, 1760 Dibble Circle West, Jacksonville, Florida 32216 or call 904-641-9942. A complete catalog, which includes additional information on the Micro Ear and dozens of other products, is $2.00.

New Souce of Crystals

If you've got an older model Bearcat scanner but can't find crystals for it, don't throw the scanner away. Take it down from the shelf, dust it off and get ready to scan. The Bearcat Radio Club has acquired the exclusive rights to Uniden's entire inventory of Bearcat crystals. Says Bearcat Radio Club Vice President Peggy Libecap, "We're always looking for new services to offer our members. This is the perfect compliment to the many services we already provide. We're happy to be of service"

DO YOU HAVE A NEW PRODUCT TO SELL?

Introduce It To The Scanning Community In...

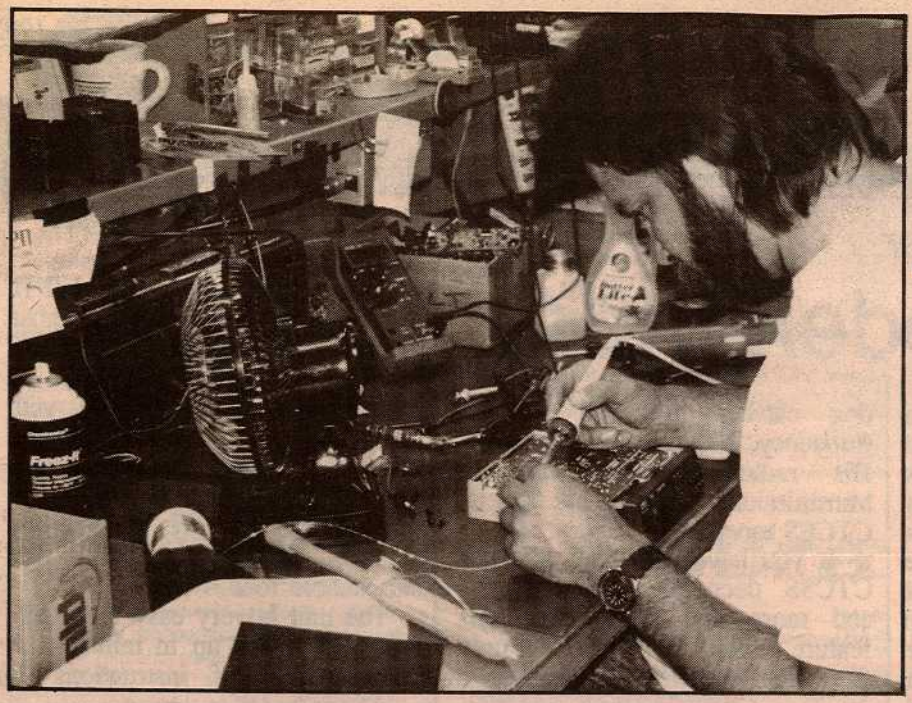
National Scanning Report's NEW PRODUCTS PREVIEW

FREE

Put National Scanning Report on your mailing list.

P.O. Box 360

Wagontown, Pa 19376



New Uniden repair facility

For more information on crystals for Bearcat scanners contact club headquarters at 1-800-423-1331.

Uniden Parts/Service Department Moves

If you go looking for the Uniden Customer Service and Parts Department on Westpoint Drive in Indianapolis, you may be surprised. There's no one home. The whole crew has upped and moved to a new address: 8707 North by Northeast Blvd, still in Indianapolis. The phone number, too, remains unchanged: 1-317-842-2483.

Uniden's Service Department provides repairs or exchange service on all Electra/Bearcat, Uniden/Bearcat and Regency scanners. They also provide service on other Uniden Products as well.

1992 Popular Communications Communications Guide



The most up-to-date buyer's guide for communications equipment—from communications receivers and scanners, to CB radio and amateur transceivers is here!

Complete with articles by experts in the communications field, including Dexter, Kneitel, Helms, Gysi, Orr, Zeller, Margolis and many more, the 1992 Communications Guide is *the* book you've been waiting for—Here's what's inside:

An introduction to the fascinating world of communications monitoring with: illustrated articles on scanning, utility monitoring, antenna selection and construction, pirate radio, QSLing and much MORE!

AS AN ADDED BONUS, noted ham Fred Maia, W5YI tells just how easy it is to get your HAM LICENSE. In plain English, Maia explains ham radio and how YOU can become a licensed ham. In addition, a product listing with PHOTOS of amateur radio transceivers for use by Technician class licensed hams is included . . .

The Brand NEW 1992 Communications Guide includes the latest communications products on the market WITH detailed specifications and photos to make your buying decision easier. We've included shortwave receivers, scanners (BOTH base and handheld) and accessories to make your monitoring post complete.

IT'S ALL YOURS FOR JUST $4.95 (please add $2.50 shipping and handling; $3.50 foreign).

YES, please send me_____copies at $4.95 each:

Name_____ Call_____

Address_____

City_____ State_____ Zip_____

Send only $4.95 each (plus $2.50 shipping & handling; $3.50 foreign) ☐Check ☐Money Order

☐MasterCard ☐VISA ☐Amex Card No._____ Expires_____

Signature_____ (required on all charge orders)

Mail to: CQ Communications, Inc., 76 North Broadway, Hicksville, NY 11801
Phone: 516-681-2922/FAX: 516-681-2926

Things That Work

The Search is Over

Tone Code/Finder

Radio frequencies are becoming a scarce commodity. As more and more people seek to use this limited resource, new methods have been developed to allow several agencies to use the same frequency(s). The problem is best illustrated by an example. In Hometown, Georgia, the police department, mayor, sanitation department, county engineer and dog catcher all share 154.1600. The mayor, like most politicians, is a very intolerant fellow. As he is driven about town in his limousine, he stays in touch with city hall by his radio. To make sure that no one is trying to reach him, he must keep the radio on at all times. This bothers him greatly since he must also listen to everyone who uses the frequency -- calls about mean dogs, clogged sewers and rusted bridges. "I only want to hear the calls that are for me!" he roars to his secretary one day.

CTCSS is a system that puts an inaudible (technically, sub-audible) tone on each user's transmission. There's a special CTCSS tone put on radios used by the police, a different one for radios used by the sanitation department, and even a tone for the mayor's radios. In some areas, even individual fire departments are issued their own CTCSS tone. In this way, a dispatcher can call out a single engine company late at night without rousing every fireman in the county out of bed.

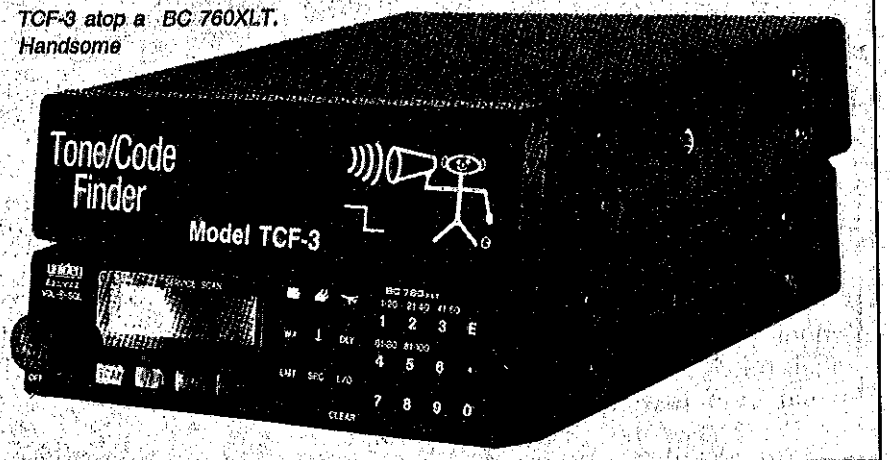
The mayor is happy now, too. Even though the police, sanitation department, county engineer and dog catcher are still on his frequency, he does not hear them. His radio responds only to transmissions bearing his special CTCSS tone code.

If you have a scanner that has CTCSS decoding capabilities -- and more and more have this feature -- you, too, can select only the calls you want to hear on a particular frequency by programming in their CTCSS tone. Maybe you only want to hear the fire station for your neighborhood. Program in their CTCSS tone and the radio will ignore alll of the others on the channel. Or maybe you have a personal interest in keeping tabs on the mayor. Program in his CTCSS tone and you radio will tune in only his calls.

There is one problem, though. How do you find out the CTCSS tone for a particular agency/user? It's not published in most frequency directories. In most cases, even the radio user is unaware of the tone that his agency uses.

The Tone/Code Finder will fit the bill in searching out those elusive and unpublished CTCSS tone frequencies. When a transmission is received with sub-audible tone modulation, a three digit display will appear on the TCF-3 front panel. The number you observe will be the actual frequency of the sub-audible tone.

The unit is very easy to install. Infact, it hooks up in minutes. A complete set of instructions is included to walk you through the installation process and gives an excellent explanation of how the unit works.



TCF-3 atop a BC 760XLT. Handsome

We have installed a TCF-3 to a BC760XLT scanner here in the office and found it to provide exceptional results, even on marginal signals. We strongly recommend the TCF-3 to any serious hobbyist. It is a perfect go-along for any shack.

The TCF-3 is $299.95 and is available from Automated Industrial Electronics Corp. 141 Granite St., P.O. Box 70, Batesburg, SC 29006. To order or for more information, call 803-532-9256.

COMMUNICATIONS ELECTRONICS INC.

Emergency Operations Center

has expanded to our new two acre facility and World Headquarters. Because of our growth, CEI is now your one stop source for emergency response equipment. When you have a command, control or communications need, essential emergency supplies can be rushed to you by CEI. As always, for over twenty three years, we're ready, willing and able to help. For 1992, we're introducing new products from Uniden, Shinwa, Cobra, Ranger Communications, Grundig, Sangean, Magnavox, Icom and RELM.

NEW! Shinwa SR001-B

List price $799.95/CE price $479.95/SPECIAL

Continuous coverage from 25.000 through 999.995 MHz.

If you're looking for an excellent synthesized scanner designed for mobile surveillance use, the new Shinwa SR001 scanner offers features never before offered at such a low price. When you purchase this wide band scanner from CEI, you'll get a free infrared wireless remote control that allows you to control your scanner from over 20 feet away. Selectable frequency steps of 5.0/10.0/12.5/20.0/25.0/50.0 or 100.0 KHz. are available. Dual antenna inputs terminating in an "N-type" and "BNC" connectors are included. Other features include 200 memory channels grouped in 10 banks of 20 channels, easy to read multi color LCD display, lithium battery for memory back-up, 35 channel per second high speed scanning, priority, timer and even an alarm to alert you to transmissions on your choice of one special frequency. We even include a mobile mounting bracket. The SR001 can be used for base station use with the purchase of the ACS-B 12 volt DC power supply for only $34.95 each. A great sounding external speaker #SPE-B is available for only $24.95.

SHINWA POCKET PAGERS

The fire department hazardous materials response teams and police department SWAT crews that need reliable radio alerting systems, stake their lives on Shinwa. We offer a two-tone pocket pager with monitor feature and even a voice storage option at an affordable price. To order, we need your paging frequency as well as tone reed frequencies. For other configurations or two-way radio information, please fax us your specifications to 313-663-8888 or phone 313-996-8888.

NEW! ICOM ICR1-B

List price $799.95/CE price $519.95/SPECIAL

Continuous coverage from 100 kHz through 1,300 GHz.

The ICOM ICR1 keeps you in touch with the world when you're on the go. The palm-size ICR1 is equipped with AM, FM and wide-FM modes to fully answer your monitoring needs. With 100 memory channels and a dual frequency selection system, you get a top-class communications receiver. Not only can you program scan searches only for signals within a specified frequency range, it's also possible to write frequencies of received stations automatically into memory. In addition, unwanted frequencies can be skipped. Order ICBC72-B battery rapid charger for $99.95 and a BP84-B 1,000 ma. battery pack for $74.95.

NEW! ICOM ICR100-B

List price $799.95/CE price $579.95/SPECIAL

Continuous coverage from 100 kHz. through 1856 Mhz.

Now you can bring a wider world of broadcasting, VHF air and marine bands, emergency services and many more communications into your vehicle. Icom's advanced ICR100 fully covers all the stations worth hearing with up to 100 memory channels and a multitude of features.

SCANNERS/CB/RADAR

UNIDEN

PRO310E-B Uniden 40 Ch. Portable/Mobile CB $72.95
PRO330E-B Uniden 40 Ch. Remote mount CB $99.95
GRANT-B Uniden 40 channel SSB CB mobile $152.95
WASHINGTON-B Uniden 40 Ch. SSB CB base $229.95
PC122-B Uniden 40 channel SSB CB mobile $113.95
PC66A-B Uniden 40 channel CB Mobile $78.95
PRO510XL-B Uniden 40 channel CB Mobile $39.95
PRO520XL-B Uniden 40 channel CB Mobile $54.95
PRO535E-B Uniden 40 channel CB Mobile $69.95
PRO538W-B Uniden 40 ch. weather CB Mobile $78.95
PRO810E-B Uniden 40 channel SSB CB Base $174.95

UNIDEN RADAR DETECTORS

RD3000ZX-B Uniden 3 band suction mount radar $119.95
RD2400ZX-B Uniden 3 band radar detector $109.95
RD90-B Uniden 2 band radar detector $64.95
CARD-B 2 band credit card size radar detector $89.95
RD3XL-B Uniden 3 band radar detector $109.95
RD9XL-B Uniden "micro" size radar detector $69.95
RD27-B Uniden visor mount radar detector $39.95

Cobra®

19 PLUS-B Cobra CB radio $36.95
18RV-B Cobra CB radio $54.95
41PLUS-B Cobra CB radio $72.95
70LTD-B Cobra remote mount CB radio $99.95
19LTD-B Cobra Classic series CB radio $44.95
21LTD-B Cobra Classic series CB radio $54.95
25LTD-B Cobra Classic series CB radio $89.95
29LTD-B Cobra Classic series CB radio $109.95
148GTL-B Cobra AM/SSB CB radio $129.95
148GTL-B Cobra AM/SSB CB radio $149.95
90LTD-B Cobra Base station $89.95
142GTL-B Cobra AM/SSB Base station $199.95
2000GTL-B Cobra Deluxe AM/SSB Base station $379.95

COBRA RADAR DETECTORS

RD3163-B Cobra 3 band radar detector $109.95
RD3175-B Cobra 3 band radar detector $129.95
RD3173-B Cobra 3 band radar detector $139.95
RD3183-B Cobra 3 band radar detector $139.95

Bearcat 200XLT-B

List price $509.95/CE price $239.95/SPECIAL

12 Band, 200 Channel, Handheld, Search, Limit, Hold, Priority, Lockout

Frequency range: 29-54, 118-174, 406-512, 806-956 MHz.

Excludes 823.9875-849.0125 and 868.9875-894.0125 MHz.

The Bearcat 200XLT sets a new standard for handheld scanners in performance and dependability. This full featured unit has 200 programmable channels with 10 scanning banks and 12 band coverage. If you want a very similar model without the 800 MHz. band and 100 channels, order the BC100XLT-B for only $179.95. Includes antenna, carrying case belt loop, ni-cad battery pack, AC adapter and earphone. Order your scanner from CEI today.

Bearcat 800XLT-B

List price $549.95/CE price $239.95/SPECIAL

12-band, 40 Channel, Nothing excluded in the 800 MHz. band.

Bands: 29-54, 118-174, 406-512, 806-956 Mhz.

If you do not need the 800 MHz. band, order the Bearcat 210XLT-B for the special CEI price of $139.95.

Magnavox® Satellite Phone

CE price $48,880.00/Special order - allow 45 days for delivery. When war broke out in Iraq, you heard all the action because CNN had a satellite telephone. When a disaster such as an earthquake or a hurricane strikes your community and communications are disrupted, you can depend on instant reliable communications, just like CNN did using your Magnavox MagnaPhone. Inmarsat communication satellites are in geostationary orbit along the equator. They beam two-way voice and data transmissions between your satellite phone and fixed earth stations. In most instances, telephone calls are dialed directly once you have selected the satellite serving your location. No matter where you are on the planet, the MagnaPhone automatically selects the Land Earth Station (LES) nearest the destination called. This makes placing a call as easy as using a standard telephone. Dual ID numbers permit a separate Inmarsat telephone number to be used to route calls to one of the external telephone ports which could be used for a fax machine or a computer data line. For telephone, telex, fax and data communications anywhere in the world, the new MX2020P MagnaPhone is the most compact Inmarsat-A, Class 1 terminal available today. Like a cellular phone, airtime will be billed to your account. The new MagnaPhone weighs just 47 lbs (21 kg), including the antenna. Add the optional ruggedized case (only $950.00) and it can travel as airline baggage on commercial carriers. When you arrive at your destination, installation can be done in less than five minutes. For more information call our Emergency Operations Center at 313-996-8888.

RELM UC202-B 2 Watt transceiver on 154.57 MHz. $114.95
RELM RH256NB-B 25 Watt VHF transceiver $299.95
RCI2950-B Ranger Comm. 25 Watt 10 Meter xcevr. $234.95
MR8100-B Uniden surveillance scanner . CALL FOR PRICE
BC65XLT-B Bearcat 10 channel scanner $114.95
AD100-B Plug in wall charger for BC55XLT 14.95
PS001-B Cigarette lighter cable for BC65XLT $14.95
VC001-B Carrying case for BC55XLT $14.95
BC70XLT-B Bearcat 20 channel scanner $139.95
BP70-B Ni-Cad battery pack for BC70XLT scanner .. $39.95
BC142XL-B Bearcat 10 channel 10 band scanner $84.95
BC147XLT-B Bearcat 16 channel 10 band scanner .. $94.95
BC172XL-B Bearcat 20 channel 11 band scanner .. $124.95
BC177XLT-B Bearcat 16 channel 11 band scanner $129.95
BC590XLT-B Bearcat 100 channel 11 band scanner $194.95
BC760XLT-B Bearcat 100 channel 12 band scanner $254.95
BC002-B CTCSS tone board for BC590/760XLT $54.95
BC003-B Switch assembly for BC590/760XLT $22.95
BC855XLT-B Bearcat 50 channel 12 band scanner $174.95
BC560XLT-B Bearcat 16 channel 10 band scanner .. $94.95
BP205-B Ni-Cad battery pack for BC200/100XLT $39.95
TRAVELLER2-B Grundig shortwave receiver $84.95
COSMOPOLIT-B Grundig shortwave receiver $179.95
SATELLIT600-B Grundig shortwave receiver $499.95
SATELLIT650-B Grundig shortwave receiver $849.95
ATS800-B Sangean shortwave receiver $89.95
ATS803-B Sangean shortwave receiver $159.95
74102-B Midland emergency weather receiver $34.95
77116-B Midland CB with VHF weather & antenna ... $66.95
77118-B Midland CB mobile with VHF weather $62.95
77913-B Midland CB portable with VHF weather $79.95
76300-B Midland CB base station $92.95
NPD-B Uniden National Police Directory $19.95
FBE-B Frequency Directory for Eastern U.S.A. $14.95
FBW-B Frequency Directory for Western U.S.A. $14.95
RFD1-B MI, IL, IN, KY, OH, WI Frequency Directory . $14.95
RFD2-B CT, ME, MA, NH, RI, VT Directory $14.95
RFD3-B DE, DC, MD, NJ, NY, PA, VA, WV Directory $14.95
RFD4 AL, AR, FL, GA, LA, MS, NC, PR, SC, TN, VI . $14.95
RFD5 AK, ID, IA, MN, MT, NE, ND, OR, SD, WA, WY $14.95
RFD6 CA, NV, UT, AZ, HI, GU Frequency Directory . $14.95
RFD7-B CO, KS, MO, NM, OK, TX Freq. Directory ... $14.95
PWB-B Passport to World Band Radio $16.95
ASD-B Airplane Scanner Directory $14.95
TSG-B "Top Secret" Registry of U.S. Govt. Freq. $16.95
TTC-B Tune in on Telephone Calls $14.95
CBH-B Big CB Handbook/AM/FM/Freeband $14.95
TIC-B Techniques for Intercepting Communications .. $14.95
EEC-B Embassy & Espionage Communications $14.95
SMHV1-B Scanner Modification Handbook/Volume 1 $18.95
SMHV2-B Scanner Modification Handbook/Volume 2 $18.95
LIN-B Latest Intelligence by James E. Tunnell $17.95
A60-B Magnet mount mobile scanner antenna $39.95
A70-B Base station scanner antenna $39.95
USAMM-B Mag mount VHF ant. w/ 12' cable $39.95
USAK-B 3/4" hole mount VHF antenna w/ 12' cable .. $34.95

Add $5.00 shipping for all accessories ordered at the same time. Add $15.00 shipping per radio and $6.00 per antenna.

BUY WITH CONFIDENCE

Michigan residents please add 4% sales tax or supply your tax I.D. number. Written purchase orders are accepted from approved government agencies and most well rated firms at a 10% surcharge for net 10 billing. All sales are subject to availability, acceptance and verification. Prices, terms and specifications are subject to change without notice. All prices are in U.S. dollars. Out of stock items will be placed on backorder automatically or equivalent product substituted unless CEI is instructed differently. Shipments are F.O.B. CEI warehouse in Ann Arbor, Michigan. No COD's. Not responsible for typographical errors.

Mail orders to: Communications Electronics, Box 1045, Ann Arbor, Michigan 48106 U.S.A. Add $15.00 per radio for U. P.S. ground shipping and handling in the continental U.S.A. For Canada, Puerto Rico, Hawaii, Alaska, or APO/FPO delivery, shipping charges are two times continental U.S. rates. If you have a Discover, Visa, American Express or MasterCard, you may call and place a credit card order. 5% surcharge for billing to American Express. For credit card orders, call toll-free in the U.S. Dial 800- USA-SCAN. For information call 313-996-8888 FAX anytime, dial 313-663-8888. Order from Communications Electronics today. Scanner Distribution Center™ and CEI logos are trademarks of Communications Electronics Inc.

Sale dates 12/2/91 through 5/31/92 AD #010192-B

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For more information call

1-313-996-8888

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Emergency Operations Center

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For orders call 313-996-8888 or FAX 313-663-8888

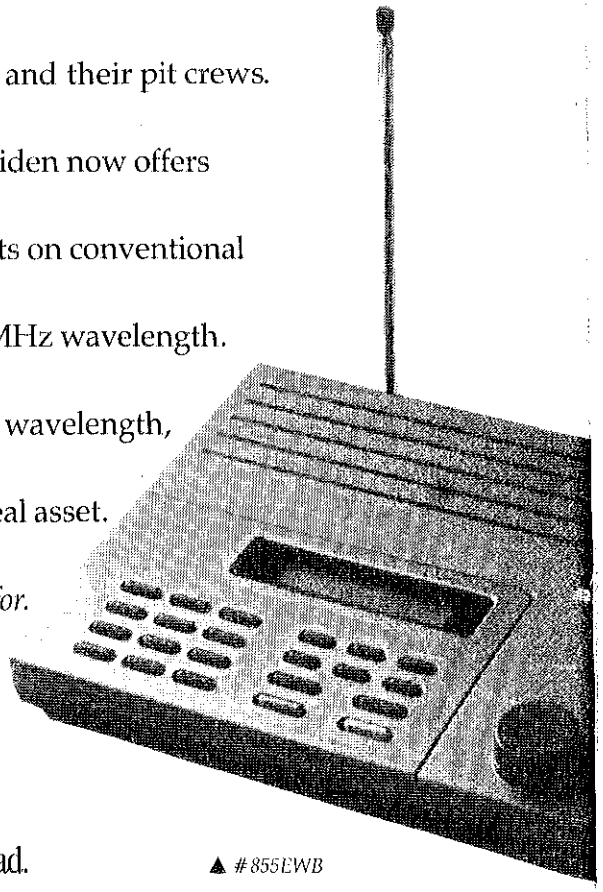
Why it's worth paying a little more for an 800 MHz scanner.



▲ #200EWB

These days, many police, fire and other emergency services, plus auto racing circuits are using a new wavelength. It's called 800-MHz, and it allows them more channels, with less interference. ▲ Uniden offers the BC 200XLT and the BC 855XLT which cover all bands including 800 MHz, allowing you to pick up their broadcasts. In addition, you can even take our hand-held scanner to the car races, and keep up with the drivers and their pit crews. From start to finish. ▲ That's why Uniden now offers scanners that not only pick up broadcasts on conventional wavelengths, but also the newer 800-MHz wavelength. ▲ As more and more departments use this wavelength, you'll find your 800-MHz scanner to be a real asset.

Something worth paying a little extra for.



▲ #855EWB

uniden®

A clear signal of what's ahead.