SCANNING THE HONDURAN HOTBED

By Charles Robertson

An extraordinary amount of Central American low band skip has been received in the last year. Before this skip was logged, few monitors realized just how Americanized the undeclared war against Nicaragua and the Sandinista rebels had become. Most of the Honduran soldiers heard via low band propagation used English in their comms, not Spanish.

About 700 U.S. troops are thought to be permanently stationed in Honduras. Tigre Island, located in the Gulf of Fonseca, houses a U.S.-built radar base for the purpose of detecting weapons shipments from Nicaragua to rebel-controlled areas along the La Unión to Río Lempa beaches of El Salvador. U.S. C-130 spy planes also scrutinize this area.

This report will deal primarily with Central American skip received early in 1984. There are many roadway check points throughout Honduras. Their main purpose is to keep weapons and ammunition from being sent from Nicaragua to the Sandinista rebels who are involved in attacks on El Salvador from the mountainous Honduran border region.

Check point personnel were heard on 30.05, and used November and Mike Papa designators. Vehicles were heard on 30.35. Victor and Tango designators were most commonly encountered. (Victor/vehicle; Tango/transport?)

Mike Papa stands for MP (military police) and is commonly heard by the joint Caribbean and U.S. forces training on Grenada.

Check points are also called "Charlie Papa" (CP). They have numbers (like Charlie Papa 4) and names (like Rainbow, which is Charlie Papa One). All personnel were English-speaking Spanish troops except for one American.

THE TEGUCIGALPA NET

Now let's turn our attention to an extensive radio system referred to by its Honduran users as the "Teuguigalpa Net." Many frequencies appear to be used, but 30.25 and 30.26 are by far the most active. The main use of these channels was to relay messages. The use of semi-duplex channels spaced only 10 or 15 kHz apart was often observed.

If you only list to one of these semi-duplex channels you may be able to hear the "other side" of the conversation, but it will be weak and distorted. Be sure to check the frequencies 10 or 15 kHz above and below the active channel; the "weak" transmission may turn out to be a completely different frequency with a strong signal strength.

Here's a list of other active semi-duplex frequency pairs having only a 10 or 15 kHz spacing:

30.19 and 30.20
30.335 and 30.35
32.585 and 32.60

Another twist in the radio communications techniques practiced by the Honduran military can be found in their use of "split frequencies." These channels are skewed 5 kHz off from standard U.S. allocations. Two split frequencies used by the Honduran military include 30.145 and 30.265 MHz.

Various types of high tech scrambling have also been monitored coming from Central America. Time domain and DES-Ped scrambling seem to be the most commonly encountered types of voice protection.

By U.S. Marine operations, possibly in Panama, have been logged several times on 34.30 MHz. Ship and aircraft
To Build or Not To Build

There was a time when the most casual glance through electronics hobby magazines would reveal a cornucopia of companies offering a wide variety of kits for the home electronics enthusiast. Building electronics kits provided cost savings, education, experience and pride of accomplishment. But with the advent of inexpensive and effective factory-wired equipment from the Orient, the kit companies gradually disappeared from the marketplace.

The one remaining stronghold, Heathkit, has gone through troubled times with many new owners (Schlumberger, Zenith). And kits from Heath are hardly cost-saving.

Grove Enterprises has often discussed the possibility of offering simple, inexpensive kits — single one- or two-transistor or IC projects such as military aircraft receivers, frequency converters, filters, preamplifiers, voice scramblers, audio processors and so on.

But there are problems. How do you explain to a customer who returns his newly-assembled prize because it doesn't work that it looks as though he assembled it with a blowtorch? How can a company warranty someone else's work?

In other words, can kits cause more problems than they can solve? Is there a risk in customer satisfaction when quality control no longer rests with the manufacturer?

We would appreciate comments from our readers, both experienced builders and would-be home assemblers, to help us decide whether or not to consider this additional venture.

HONDURAN HOTBED

34.06 Tegucigalpa, Honduras, business
34.66 Choluteca, Honduras, business
36.00 Central American business rpt.
37.35 Spanish military
37.40 26.95
42.80 49.60 Panamanian govt.

*Central American repeaters often use 6 MHz input/output separation. U.S. police communications often key up these repeaters and may be heard by skip back to the states.

Due to the channel-splitting allocations in Central America, U.S. transmissions are often distorted because they are not exactly on the Central American input frequencies.

Some Honduran frequencies monitored in the past using scrambled voice may become active again. They include 30.20, 31.70, 32.60, 32.01, 36.87 and 43.4 kHz. Additional Central American repeaters often reported rebroadcasting U.S. police communications near their input frequencies include:

33.475 (39.48 US input)
33.525 (39.52 US input)
33.675 (39.68 US input)

NEXT MONTH -- SCANNING THE CARIBBEAN PEACEKEEPERS

In response to Bob Rankin's letter about the Spanish book, I was a radio tech at Ft. Chaffee during the time the Cubans were sent there. They had a "special" section for the criminal types; we sometimes had to work in that area. They gave us a booklet, "Conversational Spanish for Correctional Workers" (PCI 499-77 ($19.64). It's put out by the Dept. of Justice. Copies may be ordered by that title at this address:

National Institute of Corrections
320 First St. N.W.
Washington, D.C. 20534.
(Gary Hickerson, Ft. Smith, AR.)

In the September, 1984 issue of Monitoring Times, James Owen says he does not know under whose control the steady carrier on 5115, 3395 and 10163 kHz are.

The University of Alabama does some work along those lines.

Department of Geology
University of Alabama
Tuscaloosa, Alabama

I received a brochure from them a couple of years ago. (Eugene Hunger, Jr., Montgomery, AL)

(EDNOTE: I contacted the U of A, the Alabama Geological Survey and the U.S. Geological Survey; none avowed knowledge of the system or the pamphlet in question. Can any other readers help? the puzzling case of the unmodulated carriers...Bob)

But there are problems. How do you explain to a customer who returns his newly-assembled prize because it doesn't work that it looks as though he assembled it with a blowtorch? How can a company warranty someone else's work?

In other words, can kits cause more problems than they can solve? Is there a risk in customer satisfaction when quality control no longer rests with the manufacturer?

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73 Magazine Withdrawn From Sale Block

About a year ago the publishing world was stunned by the announcement that Wayne Green had sold his publishing empire for a staggering $60 million. The new owner, CW Communications/Peterborough, recently stated that they would continue to publish only those magazines directed to the information technology (computer) industry. 73 doesn't fit that mold. It was offered for sale.

Now, a new announcement has been circulated to the press advising that a change of heart has occurred. 73 Magazine will be retained by CW.

We would hope that the owners will recognize the unique nature of 73 Magazine and continue its format essentially unaltered. It truly spans the electronics hobby and, although catering primarily to the amateur radio specialty, has something for everyone.

REMEMBER!
*S.A.S.E.*

We at Monitoring Times constantly receive letters from readers which begin, "Please send me everything you have on..."

As much as we would like to comply, we are not a public library service. Letters received with a Self-Addressed Stamped Envelope will be answered.

And always, my telephone line is open for pre-paid calls weekdays 1-5 pm Eastern (704-837-2216)...Bob

www.americanradiohistory.com
Here's my idea for a MT contest. NASA has a little known piece of apparatus called LDEF or Long Duration Exposure Facility. This is just a large cylindrical frame carried in orbit in the shuttle's cargo bay. Basically, for a fee, those interested can bolt their experiment onto LDEF and have it placed in orbit to be retrieved at a later time.

I can't understand why AMSAT or other amateur groups have not seized upon this opportunity. NASA won't listen to me, but if you promote it in MT maybe NASA would provide a slot for the best amateur package offered.

That's my contest idea. What's the best dream package to fly on LDEF? Packet radio is a possibility. Also amateur radio astronomy.

My idea would be a camera package. Although spy satellite resolution is unlikely, it seems that resolution better than current VHF satellites should be possible. A store and dump feature would record imagery out of line of sight of the US and digitize it when the bird is once again over the US, thus allowing a look at the other side of the globe.

Modern intrusion alarms use a TV camera coupled to a computer. The computer records the background and sounds an alarm when anything in the picture moves. An adaptation of this technology would permit the camera (turret mounted) to lock on and track a moving target within its field of view (such as another spacecraft). Another benefit of a turret mounted camera would be the ability to take multiple shots at different angles of the same area at a fixed altitude. This would permit enhancement of the pictures using stereoscopic techniques.

Color, infrared, ultraviolet, or low light level imagery would be available in addition to black and white visible spectrum imagery. Zoom ability would provide for better observation of interesting features as well as wide angle views of large areas. This data would be transmitted in a form easily handled by currently available receivers and home computers.

(David Bogart, Houston, TX)
Facts, Fables and Fun

A reply to Van Dalsen’s Question on the Derivation of the word “ham.”

By W. Clem Small, K6EA
26530 Parkside Drive
Hayward, CA 94542

A recent contribution to Monitoring Times1 made several suggestions for the possible derivation of the word “ham,” a term long used to refer to an amateur radio operator. This present note will suggest another “guess” as to that derivation, cite a previous report on the derivation under question, and introduce a few more derivations for your amusement or anamusement, as the case may be.

The “guess” (as to the derivation of “ham”), which I’d like to add to the five given by Van Dalsen, is that it comes from the same source as the name “Ham.” A person who likes to perform but perhaps isn’t a talented actor. We do have a few ham radio operators who seem to like to “perform” as they ramble on-and-on over the air, in the style of a frustrated actor glad to have an audience. Maybe there were a few of these around in the early days too.

The derivation of this use of the term “ham” is thought to be derived from all the “ham-heels” actors who had, in their better days, played Hamlet; or to those who used a 19th century actor’s makeup kit containing ham-fat; or to an actor names “hamish” McCullough who traveled with his band of actors known as “Ham’s actors.”

Leaving slang to return to more proper English, Webster’s Dictionary2 tells us that both of the terms “ham actor” and “ham radio operator” have been influenced in their derivation by the term “ham” used in “amateur.” This influence brings us around to the previous report I mentioned earlier.

Alice Schumacher, in her interesting biography of the “Father of Amateur Radio,” Hiram Percy Maxim, points out that “amateur” is derived from “amator,” Latin for “lover.” We may say that “amator” derives from “amare” which means “to love,” and as we know, amateurs do their radio operating for the love of the hobby, not for profit.

More to the point, however, Schumacher informs us that the December 1931 issue of QST reports that “ham” is the British Cockney slang usage of the first three letters of “hamateur,” their version of “amateur.” This explanation is rather close to the “as” as suggested by Van Dalsen in the Monitoring Times article cited earlier.

Early lexicologists (British term for persons concerned with the history and meaning of words) thought “Ham” was an unsatisfactory term. They pointed out that the U.S. Army had rejected it, suggesting “aerography” for “wireless” (which later became “radio”), “aerogram” for “wireless message,” and “aerographer” for “wireless operator.” The “aero” prefix referring to the use of wireless signals traveling in the air, rather than on wires as they did in land-line telegraphy.

Going further, the Oxford English Dictionary reports olden-day usage of “Marconigram” for “wireless message,” while McCreery in Monitor today6 informs us that Marconigrams were handled by operators called “Marconi-men.”

Marconimen were later to be known as “Sparks” or “Sparker” due to their association with the spark-gap transmitters used in those days. Today the commonly used name for such people seems to be “Radio operators” (which, incidentally, are a ‘near-endangered species’ due to the rapid advance of automation).

Dugnall Macrae, the world’s first radio operator, decided to pursue the use of electromagnetic waves for communication after reading an obituary report of Heinrich Hertz7, the first person to knowingly produce radio (“Hertzian”) waves. The obituary reviewed Hertz’s discovery which had produced those waves that could radiate through space.

The young Marconi was so excited with plans to further Hertz’s discovery that he cut short a vacation in the Italian Alps Mountains (that’s real dedication to science) to rush home and commence the work which has now become history. It took a good bit of time and effort, but Marconi was successful in developing a system for what we call “radio communication.”

Subsequently, the first paid “Marconigram” in history was sent on June 3, 1877 by Lord Kelvin, a well known scientist.

Kelvin had been considering research in early land-line and transatlantic cable communications and he is thought to have earlier said, in reference to sending messages, that he “preferred a boy on a pony to wireless”.

But speaking of delivering messages by animal power, did you know that in April of 1901, the British Navy’s Chief of The Bureau of Equipment ‘appointed a board to consider the advisability of discontinuing the homing pigeon service and substitute for it some form of wireless.’

I consider that a very fortunate date in radio history for all radio operators for all time to come, because among us would like to be known as a “pigeon operator”? So history goes.

REFERENCES

TO CONCLUDE OUR SERIES ON SAC, MONITORING TIMES PRESENTS IN THIS ISSUE A SPECIAL SECTION ON MILITARY COMMUNICATIONS

SAC—What Is In The Future?

CONCLUSION

By Art Lewis

Command control communications—what the Air Force terms "C2" is getting more and more emphasis, having displaced weapons as a top priority item during the past few years. SAC personnel are quick to admit there is still a long way to go.

Literally hundreds of different projects are underway simultaneously; some have just gotten started, others are near comple-

tion. Some of the projects in our area of interest are presented briefly here:

1. A VLF Ground Wave Emergency Network (GWEN) (see September 1985 Monitor for report) to provide survivable ground-link communications between the NCA and NORAD, SAC, and coastal radar sites.

Sixty GWEN towers are already in place with many more to come for a total exceeding 300 sites. With enough sites (nodes) in place there is no way all sites could be disabled by missiles.
KC-135 refueler connects with E-4A NEACP (National Emergency Airborne Command Post)

C3I

By Bob Grove

Command, Control, Communications and Intelligence

is the military backbone for defense/offense. In order to effect these responsibilities, an enormous network of electronics has been implemented worldwide by the Department of Defense.

NAVSTAR-GPS

The Navigation System using Time and Range--Global Positioning System is expected to be fully operational in 1987. By then, 8 or 13 present systems will be eliminated, including aircraft VOR, TACAN, two long-range navigation systems.

The complete NAVSTAR system will incorporate 24 satellites in 3 rings, circling the earth every 12 hours at an altitude of 12,500 miles. Positioning accuracy will be on the order of 10 meters (33 feet).

Ground users will be issued 30,000 L-band sets for interrogating the satellites to provide positioning data.

FLTSATCOM

UHF military aircraft communications, primarily Air Force and Navy, are assisted by several satellites including the Navy’s Fleet Satellite Communications system, the USAF AFSATCOM and the commercial MARISAT.

AFSATCOM provides direct radioteletype access via UHF to high priority DOD elements such as the National Command Authority and Strategic Air Command as well as the Commanders-in-Chief of Europe, Atlantic and Pacific (CINCEUR, CINCLANT and CINCPAC).

ASAT

Antisatellite systems are also being developed to protect allied communications systems and detect hostile attack. COBRA DANE (“COBRA” is a code word assigned to Hq. USAF) is a multi-object (up to 200 targets) tracking radar located at Shemya Island, Alaska.

Antisatellite weapons would be fired at low-orbit Soviet satellites by F-15 fighters.

PAVE PAWS (“PAVE” is a code word for USAF night avionics), with dual installations at Otis AFB, Massachusetts and Beale AFB, California, assists the NORAD (North American Air Defense Command) Cheyenne Mountain, Wyoming complex in detecting submarine-launched ballistic missiles (SLBM) at distances of 2000-3000 miles from the coast.

NATO

US Allies comprising the North Atlantic Treaty Organization operate three geosynchronous phase 3 Atlantic satellites each containing one receive antenna and two transmit (wide and narrow beam) antennas.

Each satellite has three transponder channels capable of interfacing with the DSCS satellites. Tracking is provided by an X-band beacon, while command and control is done on S-band.

OTHE

Over the horizon backscatter radar utilizes HF (shortwave) propagation to detect low-flying aircraft (stealth type) at distances of 1100 miles from the North American continent.

Listeners-in will hear a humming noise on discrete...
The Space Defense Operations Center is located at NORAD and is designed to provide enhanced echelon command and control, disseminating space-related information to other US commands.

GEODSS
Five sites spread over the globe optically detect, track and identify satellites at altitudes of up to 20,000 nautical miles. The Ground-Based Electro-Optical Deep Space Surveillance System functions in cooperation with NORAD.

JSS
Eight regional operation control centers comprise the Joint Surveillance System, designated for peacetime air surveillance with Canada and Alaska.

SAICIN
Direct and secure data communications with enhanced survivability from National Command Authorities to nuclear strike forces are the goals of the Strategic Air Command Digital Network.

MILSTAR
Two-way EHF communications from the President and other National Command Authorities directly to bombers, submarines and tactical forces would be provided by the Military Strategic Tactical and Relay Satellite as well as the System (Strategic Satellite System) at orbits of 110,000 miles altitude. Scheduled for 1987 launch.

WWMCCS
The World-Wide Military Command and Control System consists of 50 digital computer systems to provide early warning of hostility, assess its magnitude and select retaliatory measures.

The network also transmits emergency action messages as well as damage assessment data to terminate US military action.

BMWS
One of the oldest defense programs, the Ballistic Missile Early Warning System of the US Air Force is being upgraded with new computers at the Greenland, Alaska and United Kingdom installations. Together with PARCS (Perimeter Acquisition Radar Characterization System) in North Dakota, individual warheads and their targets may be assessed well ahead of impact.

STRATSAT
The Strategic Air Command is busily trying to implement its virtually-invincible Strategic Satellite System consisting of four dedicated satellites 113,300 miles above the equator.

At that altitude it is supposed that the birds will not be blacked out by interference or jamming even during an all-out nuclear holocaust.

But will anyone be left on earth to use them?

We would like to thank National Defense magazine for their help in preparing this article.

Project ELF
A Special Report
by Bob Grove

While the pages of MT have been sporadically dotted with items about resistance to the proposed installation of the extremely low frequency (ELF) transmitter facility in Wisconsin and Michigan, details on the actual antenna have been lacking.

Now, thanks to a newspaper clipping sent in by MT reader Bob Wilson, we can provide some details.

In operating in the 76 hertz range, coded signals could broadcast status reports to submerged submarines at depths in excess of 300 feet worldwide. Data rates of 3 characters every few minutes seem slow, but are necessary at these low frequencies.

Two transmitter sites have been selected and will be erected now that the courts have cleared injunctions from environmentalists who have been involved. Environmental Impact Statements are due by February 1985.

One site is near Clam Lake, Wisconsin in the Chequamegon National Forest; There, 28 miles of overhead antenna will be strung in an "X" pattern.

The other site--148 miles away--is at K.I. Sawyer Air Force Base in the upper Michigan peninsula; Here, 56 miles of overhead wire will be arranged in an "E" pattern.

While either site alone is capable of communicating with submerged submarines over great distances, only both sites, controlled and synchronized at Sawyer, could provide global capability according to U.S. Navy spokesmen.

Approximately 4-1/2 months of delay were incurred by concerned citizens who were aware of post-1977 studies which linked ELF radiation with a variety of health hazards including cancer, behavioral changes, infertility, changes in growth rates and birth defects.

ALTERNATIVES
The Wisconsin and Michigan sites were chosen because of ground conductivity, better than anywhere else in continental United States and the only other submarine communications system that is considered survivable after nuclear attack is the airborne TACAMO (Take
The surface of the oceans' waters to be received by optical detectors on the hulls of submarines.

The satellites could be controlled by uplinks from earth stations, or could serve as passive reflectors for beams fired from the earth.

In any case, it would appear that the pathway is now clear for the construction of Project ELF.

**NATURAL POWER SUPPLIES**

By Al Smith,
Box 280,
Wamsutter, WY 82336

This past decade's emphasis on fuel conservation has renewed interest in naturally available energy, or what has come to be called alternate energy, including small scale electricity production.

Many homesteaders, outdoor survivalists, and radioamateurs are taking advantage of developments in the field of home-brew electricity. Their modest photovoltaic arrays (PV), wind energy conversion systems (WECS), and water wheels yield direct current electricity which, when shuttled through storage batteries, is plentiful enough to any of the present generation of radio equipment.

If you consider your radio an essential during natural disasters, interruptions to commercial power, or otherwise away from commercial power sources, think about implementing one sort or another of natural power supply.

- Photovoltaics are indisputably the most reliable workers of naturally available energy since they have no moving parts and will yield DC electricity from any earthly climate. As you probably know, photovoltaic cells are regular patterns of silicon cut some millimeters thick and overlaid with ribbon conductors. This configuration of materials rectifies 0-3% of sun energy into direct current.

- Single cells have peak voltage outputs (Vp) in full sunlight around one half volt DC at up to two amperes according to the cell's dimensions and the reactance of its load.

To make up a photovoltaic panel, cells are patterned on parallel-series configurations for desired voltage and amperage, underlayed with a supporting plate and insulated, overlaid with transparent weatherproof material, and sealed.

Panels are commonly manufactured for 6-36 Vp output at 2-50 watts peak efficiency. It is important to remember that voltage and current peak ratings are for conditions of full sunlight and a non-reactive load. Care must be taken to match the photovoltaics' output with the load of the storage batteries it will be connected to.

A small 14 Vp 10Wp panel, even in clear sunshine, is poorly matched to a nearly-depleted 12-volt auto battery of sixty amperes storage capacity, and would transfer only a couple watts energy to its cells in an hour. The remaining seven or eight watts of the panel's output would be used up heating the battery's places due to the reactance of this load. Conversely, a 14Vp 10Wp panel could overcharge and destroy a 12VSAH ni-cad in a day.

Gel cell storage banks seem best suited to PV use due to their consistent voltage under light or heavy loads, minimizing reactance and consequent heat loss. However, any battery bank connected to a PV array must be kept within 10% or 15% of its maximum charge potential in order to accept the best part of the PV charge.

Photovoltaics' peak voltage may exceed the batteries' maximum charge potential by 10% to 30%; a 12-volt battery can accept a 13- to 16-volt charge at moderate amperage.

When planning your installation, the batteries' total storage capacity must be at least six or twelve times the daily current consumption of your radio equipment. Also this daily current consumption must be 75% to 85% of the average daily current output of the PV array. This accounts for cloudy periods, days of long radio usage, and reactance and storage losses.

To minimize reactance and maximize battery life, make the batteries' cycling (their discharges between charging times) as shallow as practicable. These principles apply likewise to WECS, waterpower, or other installations except that greater electrical storage capacity must be allowed for these sources as they're not as dependable as the solar array.

The author uses a Solarax 14Vp 20Wp array on four parallel 12V 20Ah gel cells to power an Allied receiver which consumes 12V @ 500mA, and the gel cells are switched into a parallel-series configuration to operate 24V 800mA military radios AN/FRC-47 and AN/ORK-17.

Never is any battery allowed to drain below 11 volts potential which is measured with the photovoltaics momentarily disconnected from the load.

PV users will notice that when panels in full sunlight aren't connected to an appreciable load, their output potentials will be 30-50% above their rated voltage peaks for matched loads. My 14Vp panels normally average 20V open circuit voltage on a 50V meter alone. Their loaded potential won't drop below 3.5 volts, however, regardless of the load's reactivity, which obviates the need to closely match the photovoltaics to the load of the battery bank.

Match boxes are produced for PV systems or all of the batteries can be charged individually from the PV output if the bank as a whole is not too deeply discharged and reactive.

If this happens in the author's home, quick pickup from the WECS is possible as cloudy periods turn windy.

Photovoltaic arrays are sold from $7 to over $20 per peak watt capacity depending upon quantity, quality and dealer. Batch or cosmetic curl deals can save some, but beware of faulty PVs from fly-by-nighters!

Checking the classifieds of 'some electronics magazines you may find $4 or

---

**MONITOR**

Do it yourself and save. Why pay for someone else to have all the fun? Amateur Radio's Technical Journal publishes more easy-to-build construction projects than any other ham magazine. Every issue is packed with simple articles that will put your soldering iron to work.

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73: Amateur Radio's Technical Journal. PO Box 931, Farmingdale NY 11735

73RMT—

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www.americanradiohistory.com
### UNITED STATES ANNUAL AVERAGE WINDSPEED

**WINDSPEED VS. KW (HOURS/MONTH)**

<table>
<thead>
<tr>
<th>Windspeed (MPH/MONTH)</th>
<th>WINDSPEED (MPH/MONTH)</th>
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<tr>
<td>0-10 MPH</td>
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*Calculated using Rayleigh Wind Speed Distribution*

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Don Nobles Electronics, Inc.

*Not For TV*

---

**Ranovated auto batteries make good economy with WECS. Ten batteries of forty to one hundred ampere hours capacity are used here in conjunction with a 200-watt Wincharger, and are checked monthly with a hydrometer as undercharge or overcharge in any of them throws in an element of reactance, just as in the previous discussion of photovoltaics.**

Only in windier areas do commercial WECS prove better economy than commercial power over a period of several years. But here on the windy Wyoming plateau, or in other remote locales where there is no commercial power, they’re a boon to a household.

Jack Park’s text “The Wind Power Book” (Cheshire House, Alto, 1968, $19.95) is one of the best to help determine WECS viability in your locale. Areas with mean windspeeds exceeding 10 m.p.h. (>150 watts per square meter) prove best to WECS buyers. Check your area’s airports for wind statistics, and consult Park’s text (or another) for procedures on WECS production estimating, machine sitting and calculating tower requirements. These considerations are quite complicated but implicit to understanding WECS potential.

The watchwords of this sort of alternate energy are to put the machine as far from the ground and any azimuthal obstacles as possible; and if you must buy one rather than build one, choose a proven machine.

---

### Renovated auto batteries make good economy with WECS.

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### AC electronics can be powered from your storage batteries through a DC-to-AC inverter, which is an electronic or electro-mechanical device to convert a DC voltage to the needed AC potential. Most modern converters of the static (electronic switching) type yield a square wave of 50, 60, or 400 Hz at 110, 220, or 440 VAC and are sized from 10 watts to 10 kilowatts.

Most inverters run around 65% efficiency near their rated load, but some can loaf along at 90% efficiency. Some radios such as Drake and Hammarlund whose AC power supplies are sufficiently choked for line frequency nine volt wave, may pass an obnoxious buzz from the square wave power; inverter manufacturers print plans for extra filtering for such instances.
Another type of DC-to-AC inverter is the motor-generator, consisting of a DC motor and AC generator. These run at 50% to 80% efficiency, produce sinusoidal AC, and may be had quite reasonably so.

Deep cycling high storage capacity batteries such as those used with DC power equipment are best suited to regular inverter usage, or any regular current draw exceeding a few amps DC. Exide is the commonest North American manufacturer of deep cycling batteries; there are many more.

Home-grown power for radios needn't be an expensive project, but as with radios, experimentation is often the best path to success.

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#84019: A Hydropower Turbine You Can Build for Less than $1000: $15.00.
Hilton, Inc., P. O. Box 645, Brownsville, CA 95919: "12/16 Construction Plans", 2KW WECS, inquire for price.
W.S. Cornelius Enterprises, P. O. Box 57, Alblon, CA 95410: plans and kits for auto alternator based WECS.
Thermax Corp., One Hill Street, Burlington, VT 05401: plans, kits, and low speed PM generators.

COMPONENTS SUPPLIERS
Solarwest Electric, 232 Anacapa Street, Santa Barbara, CA 93101: Catalog
Photocum, Inc., 7745 East Redfield Road, Scottsdale, AZ 85260: Catalog Solar Electronics, 156 Drakes Lane, Summertown, TN 38483: PV-WECS consultant
Solex Corp., 1335 Piccard Drive, Rockville, MD 20850: manufacturer PV - brochure
Surplus Center, P. O. Box 82209, Lincoln, NE 68501: WECS, generators, inverters - catalog
Encom Corp., 27600 School-craft, Livonia, MI 48150: PV manufacturer - brochure
Bergey Winpower Corp., 2001 Priestly Avenue, Norman, OK 73069: WECS manufacturer - brochure
Enertech Corp., P. O. Box 420, Nowich, VT 05055: WECS manufacturer-brochure
Jacobs Wind Electric Co., 2720 Fernbrook Lane, Minneapolis, MN 55444: WECS manufacturer - brochure

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I now wish I had opened the 13640.6 kHz transmission which appears as one of the Items listed in this month’s loggings. It sounded like a Spanish female numbers broadcast (5 figure groups) but it appeared that the tape was being played backwards.

I wonder if any of you readers observed this particular activity.

One of the Crypto Training Manuals used over the years, "MILITARY CRYPTO-ANALYSIS, PART I," by William Z. Friedman, has been declassified and is available from Aegean Park Press, P.O. Box 2837, Laguna Hills, CA 92653. The cost is $20.00 postpaid. This book describes analytical substitutions for the various types of monoalphabetic substitution systems.

The manual available from the same publisher is "COMPUTER SIMULATION OF CLASSICAL SUBSTITUTION CRYPTOGRAPHIC SYSTEMS" by R. F. Lauer. Cost is $20.00 postpaid. California residents must include sales tax on the above two books.

This latter publication has 200 IC company programs for various analytical procedures and it also contains information on U.S. cryptographic patents plus a list of valuable references.

The programs were written for a Commodore PET computer with 8K of memory. These programs can, with minor modification, be run on any other micro-system.

The author recommends "THE BASIC HANDBOOK" by D. A. Lyle for assistance in tailoring the programs for your specific computer.

Yet another source for books of interest to Crypto buffs is Dover Publications, Inc., 180 Varick St., New York, NY 10014. Four titles currently listed in their catalog are: "CRYPTOGRAMS AND SPIGONS" by Nora Gleason, $3.95; "SECRET WRITING" by L. H. Lysing, $2.50; "CRYPTOGRAPHY" by L. D. Smith, $2.95; and "CRYPTANALYSIS" by Helen F. Gaines, $4.50. Shipping costs are $1.50 for one book, $1.25 for two or more books. New York residents must include sales tax.

The author comments: "We are excited to announce the introduction of the "1984 LOGGING" book, which is now available from various sources."
the average range you can hear most VORs on the ground - at least with a handheld scanner.

The airport VOR and ILS frequencies make good catches, although you have to be pretty close. Dayton Approach/Departure Control - 134.450, 118.850, and 127.650; Dayton Tower - 119.900; Ground Control - 121.900; Clearance Delivery - 121.750. Dayton Approach can also be heard on 118.000 and 126.700.

The ILS frequencies (108-118 MHz) are used for instrument landing service. They are assigned to various runways. 128.500 (108 -- 121.750. You can you will hear an unmodulated carrier or a Morse Code ID. By the way, that is pretty much what most VOR’s sound like as well.

The Dayton International Airport frequencies are 108.300 (Runway 18), 108.900 (Runway 6L), 110.300 (Runway 24L), and 111.900 (Runway 24R).

ATIS stands for Automatic Terminal Information System. By listening to this frequency you can learn about such things as weather information and which runways are being used.

The airport is always identified.

The ATIS usually repeats a recorded message lasting about a minute. The Dayton ATIS frequency is 125.800. You can generally get a better report on the local weather frequency (162.475 in Dayton)!

BE PREPARED

If you decide to take your scanner on a trip, it is a good idea to know exactly all the points you will be able to listen to along the way. I made a significant error in this respect. I thought my flight from Dayton would land in Kansas City to take on discharge passengers. I was wrong; the city was St. Louis.

You can always use the search function on the scanner and locate the ATIS, ILS, and VOR frequencies. Fortunately, the flight did stop at Kansas City on the return.

LOS ANGELES

The next stop was Los Angeles International Airport, LAX. Just a quick summary of frequencies I monitored there:

108.500 ILS
109.900 "
111.100 "
111.700 "
113.600 VOR
120.950 Helicopters
121.400 Tower
121.650 Clearance
121.750 Ground
122.100 Flight Weather
122.100 Flight Service
122.200 ""
122.500 ""
122.950 Unicom
124.100 Appr/Dprt
124.500 ""
124.900 ""
125.200 ""
127.400 Los Angeles Ctr
128.050 ""
128.500 ""
132.150 Los Angeles Ctr
132.500 ""
133.800 ATIS
133.900 Tower
134.400 Los Angeles Ctr
135.500 ""
135.450 ""
135.650 ATIS
162.350 Weather

There are plenty of other airports in the greater LA area, but I just concentrated on the airport into which I flew.

It is a good idea to search between 128.800 and 132.000 MHz to hear many of the airline companies’ internal communications regarding such things as luggate, gate changes, food handling and the like. There are literally dozens of such stations at LAX, but space does not permit me to list all of the active frequencies.

SAN DIEGO

From LAX I rented an automobile and headed south to San Diego. A little sampling from the San Diego area includes:

42.120 CHP
42.340 "
42.440 "
42.540 "
42.560 "
42.880 "
134.725 San Diego PD (Det)
154.753 Co. Sheriff
157.250 Co. Sheriff (Det)
158.730 " " PD-F-1
158.970 " " PD-F-2
159.090 " " PD-F-3
159.045 " " PD-F-4
158.920 " " PD-F-6
154.085 " " Fire Dept.
154.145 " "
154.310 " "
152.030 Mobile telephone
152.060 "
152.090 "
152.120 "
152.220 "
434.025 "
454.075 "
454.125 "
152.510 "
152.630 "
152.810 "
162.400 Weather

There are many more services and types of frequencies in use in San Diego and Imperial counties -- over 5,700 in the directory. There was a special NOAA Weather station set up on Mt. Wilson (WXN 82) operating on 162.475. It broadcast weather forecasts for the Olympic venues in both English and French and was shut down after wards.

For those of you wishing to venture south of the U.S./Mexico border and having a good understanding of Spanish, you may wish to tune in to a few of these frequencies:

31.850 Baja Judicial PD
150.160 "
151.400 Tijuana Commercial PD
162.050 Baja Judicial PD
166.125 Tijuana PD (down-town)
166.300 Tijuana PD (La Mesa)
166.425 Tijuana PD (Taco)
166.525 Tijuana PK (Beaches)
166.650 Tijuana PD (Caps)
165.325 Mexican Customs
161.175 Tijuana Taxi
170.725 "

You can also pick up the U.S. Customs and Immigration information station on 1610 kHz (Travelers Information Service).

After work was completed in San Diego, it was on to Seattle and up into Canada -- British Columbia and Alberta in particular. Next month’s “Tune In Canada” column will feature frequencies heard in those two provinces. Following that I will return with another special column to complete the monitoring with frequency information from Juneau, Fairbanks, Anchorage and, yes, those Kansas City airport frequencies.

Remember when you travel to take your scanner with you -- it is amazing the number of frequencies you can listen to. See you next month in “Tune in Canada.”

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THE MIDDLE EAST HOTBED

Since as I write this column things have not completely cooled down in the Middle East war between Iran and Iraq, perhaps a look at some of the stations in the Persian Gulf area is in order.

Iraq has one Coast Station which operates on HF - at Basrah. The call sign is YIR and frequencies to try are 4220, 6330, 8440, 12660, 16880, 16906 and 22338 kHz, all CW.

Iran has several stations on its southern coast, many of which use common frequencies. The following list of stations can use either SSB or CW on 4305, 5750, 7653 and 11550 kHz:

Abadan Radio (EQA) 4292 4376 6362 6515.7 8469 17245.3 13069.5
Abadan Radio (EQZ) 4292 4428.6 6362 8789.6 8471 13140.5 13069.5 17286.5 16981.2
Abbas Radio (EQR) 4292 4403.9 8362 6515.7 8469 8731.3 13069.5 17279.4 22443 22701.4
Bushire Radio (EQM) 4349 4369.8 6425 6515.7 8469 8746.8 12700 17319.7 22602.2
Ghosbeh Radio (ECP) 4292 4419.6 6362 4434.9 8469 8789.6 13069.5 13140.5
Khark Radio (EQD) 4349 4385.3 6425 6515.7 8469 8805.7 12700 13193.8 22695.2
Khoramshahr Radio (EQR) 4292 4379.1 6362 6515.7 8469 8990.2 13069.5 17307.3 22443 22608.4
Khor Mussa Pilot Station Radio (EPPJ) SSB 4428.6
Kuwait's only coast station, Kuwait Radio (KK), uses the following CW frequencies: 6381, 8997, 12895, 12925, 16995, 22504 kHz.

The COBRA network has a call sign for Bahrain Radio of A9M.

CORRIGENDA
For those of you who haven't yet figured it out (and I am sure most of you have) there was an error in my September column. In the chart of VHF channel assignments which appeared in that issue, the headings were left off.

For anyone still wondering, the first column is the channel number, the second is the ship transmit frequency, the third is the coast transmit frequency; the fourth column gives the user in Canada and the fifth column gives the user in the United States.

As always your correspondence is welcome. Please direct your comments, questions or suggestions to: James R. Hay, 141 St. John's Blvd., Pointe Claire, P.Q., Canada H9S 4R2.

SIGNALS FROM SPACE

by Larry Van Horn

The NOAA/NESS weather satellite program has suffered several major setbacks over the last couple of months. On June 11, the NOAA-8 attitude control systems failed and now the spacecraft is tumbling. No systems are being used operationally.

But there appears to be some hope of recovery. The NOAA-8 beacon is being left on and the NOAA-6 beacon is being turned off during periods of conflict between these two spacecraft.

NOAA-7 has serious power regulation problems caused by a loss of power supply shut loads. However, all systems appear to operating nominally with APT signals being sent on 137.62 MHz and HRPT signals on 1707 MHz.

NOAA-6 has been reactivated to replace NOAA-8 and it is now the primary morning operational spacecraft, transmitting APT signals on 137.5 MHz and HRPT signals on 1698 MHz.

The orbiting satellites aren't the only satellites in trouble. Failure of the second encoder lamp on GOES-EAST has had a major impact on the GOES program. When the lamp failed July 29, geostationary satellite imagery of an area from the U.S. west to midwest and from southern Canada to southern South America was terminated.

To recover from this loss GOES-WEST has been moved to a position near 98 degrees west to provide coverage of the Atlantic and part of the Pacific during the hurricane season. GOES-4 at 139 degrees west has been reactivated.

Both GOES-4 and GOES-EAST will be used to relay VESSR data collected by GOES-WEST, and for WEFAX and Data Collection Systems operations.

Those of you in the Pacific/Asian areas desiring information on the Japanese geostationary weather satellites can get further information on the GMS system. This information is provided in the GMS users guide published by:

Meteorological Satellite Centre
3-235 Nakakiyoto
Kiyosi, Japan
Tokyo 180-04

There is a nominal charge for this document.

The Japanese GMS-3 was launched at 2130Z on August 2 and is drifting 1.7 deg. day westward. The satellite will be on station at 140 deg east by September 11. Operational use of GMS-3 is scheduled to occur as this issue reaches your mailbox.

Bob Grove, WA4PQY, was recently cited by AMSAT for his enthusiastic support of the amateur satellite pro-
I recently received a new catalog from Fred Osterman and Universal Shortwave Radio. They just came out with a new book titled, "The Hidden Signals on the Satellites" by Tom Harrington and Bob Cooper. Price on the book is $14.95 + $1.50 P & H. I have not seen a copy of the book as of this writing so I do not know which satellites or coverage the book takes. I hope to review the book in the future. Address is 1280 Aida Drive, Reynoldsburg, Ohio 43068.

Chris Rodgers from the land down under has checked in again with another nifty report on the Indian Ocean and Pacific west fleetsatcom satellites. Chris reports that between 248.800 and 249.725 MHz he has received numerous carriers and facsimile channels, but no voice. The signals from 248.8 to 249.345 are probably coming from the Marisat/Gap-filler satellites at 73 and 176 degrees east. The rest of the spectrum might be from the LES 8/9 satellites. Chris also reports the following Indian Ocean fleetsatcom frequencies in use:

- 250.65 Continuous data
- 252.16 Data
- 253.85 Data
- 254.140 Data
- 252.140 Data
- 253.62 Data
- 252.200 Facsimile
- 252.225 Just a carrier
- 252.47 Data
- 252.525 Carrier only
- 257.050 Data
- 259.950 Scrambled
- 258.650 Data
- 256.375 Facsimile
- 256.500 Carrier only
- 256.550 Data
- 268.450 Cipher

I am told that the DFV report on 261.800 was a 'false positive'.

Chris reported that 261.800 appeared to be used as a calling channel for the Navy units and noted a brief transmission between Telescope and Leading Edge on 268.350 before going cipher. Nice set of intercepts. Chris and HF readers will be looking for more from down under very soon.

Signals from Space would like to see your intercepts of satellite signals. This column will feature all satellite material regardless of the satellite system. Send your comments, questions, contributions to:

Signals from Space
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Grand Prairie, TX 75050

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LISTEN IN ON THE LF EXPERIMENTERS' BEACONS

There are still a few license-free experimental radio bands, and the 1750 meter band (150-190 kHz) is one of them. A handful of stalwart experimenters build two-way radio equipment (usually CW) in order to maximize coverage in this electrically-noisy part of the spectrum.

An even smaller number put automatic beacons on the air, often identifying with their initials or another hand-picked group of letters and numerals.

The FCC limits operation to low power (1 watt)
and short antenna lengths (15 meters, including feed-line), so maximum distances heard are generally on the order of 100 miles or so.

The following list of recent experimenters was published recently in the LOWDOWN, official magazine of the Longwave Club of America (45 Wildflower Rd., Levittown, PA 19057) and was written by Mitchell Lee.

Most "lowers" operate their beacons on the weekends, although some are on the air 24 hours a day for propagation tests. They would appreciate knowing if you hear their signals.

Additional information about LWCA or to send in reports, write to the address above and enclose $1.

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JUSTICE AND TREASURY DEPT. AGENCIES

Conspicuous among the agencies missing on the "unclassified" federal government frequency master file (now reclassified by the Reagan administration but available from the Grove catalog) are those of the departments of the Treasury and Justice.

Operating primarily in the 163-168 MHz VHF-FM high band and 412-419 MHz portion of the UHF-FM land mobile band, communications among the various bureaus of these two agencies are considered sensitive enough for their frequency files to be exempted from public inspection. But what are the various sub-agencies which are sheltered under the cover of those two major departments? Let’s have a look.

The Department of Justice is subdivided into eight offices of administration, two boards, six prosecutive divisions, and 28 bureaus. It is these six bureaus which are most commonly sought by scanner enthusiasts. They are: FBI, DEA (Drug Enforcement Administration), DEA (Drug Enforcement Admin-


One of these six bureaus, the FBI is probably the most visible, employing some 9,000 agents coordinated through 13 headquarters divisions operating 59 field offices throughout the United States and Puerto Rico.

The Department of the Treasury maintains close liaison with intelligence agencies throughout the federal government, with special training conducted by the Federal Law Enforcement Training Center (FLETC) near Brunswick, Georgia.

FLETC also trains agents of the State Departments as well as their own bureaus which include: Internal Revenue Service (IRS); Alcohol, Tobacco and Firearms (ATF); U.S. Customs Service; and the U.S. Secret Service (and its bank divisions — White House Police, Executive Protective Service, and Treasury Security Force.

Several military agencies (Defense Intelligence Agency, etc.) and two civilian agencies (Intelligence Agency and National Security Agency) also enjoy immunity from public scrutiny, although their communications — now largely conducted under SECOM (secure communications) measures — have been reported on occasion in the past.

PEN PALS: Friendship or Fraud?

By John M. Kapinos

Posting a reception report to a Third World nation station might get you a bit more than the anticipated QSL card. The odds are pretty good that a letter, or many letters, will be received from folks overseas requesting that the reporter become their "pen pal." The first contact will be innocent enough, perhaps suggesting a photograph and some used stamps or postcards, with a promise of "something newtastic in return." That's your decision. Oh, yes; the native craftwork will come along in due course, usually a cheap trinket that one would not buy at a local five and dime here in the Americas. Then comes the semi-hard sell.

"Please send me an inexpensive camera so that I can send you pictures of myself and my family; don't forget the film."

With the inexpensive camera and film one their way, along comes another letter.

"Here are the photographs you requested; as you can see, I am a very cute family and I do not have shoes; can you help us out?"

The line usually continues, "The customs people usually steal the shoes (interestingly enough, they didn't steal the camera and film!), so rather than sending the actual shoes, please send me $50 U.S. so that we can buy them here." And on and on it can go.

A variant on the scheme goes something to the effect, "I am sure that you have read about the floods (drought, plague, etc.) in my country and I beseech you to send me $50 U.S. Dollars to help me out."

It must be understood that these "pen pal" letters do not come from chance. Major newspapers in many Third World nations run pages of "pen pals wanted" ads; your name may be among them. In most cases only the name is listed, no address. To get the address, one must send a specified fee to the person who placed the ad. That person is usually an employee of the postal system, then may be from the station you wrote to for the QSL.

I am not trying to discourage international friendship but to advise that these things do happen. One could wind up a lot deeper in a situation than he would have been with some simple "no solution. There are a couple. DO NOT put your return address on the envelope. Even the most corrupt postal systems will not dare to open a letter if you do not put a pen pal letter, it's your decision. Personally, I send the requested postcard, some nice used U.S. commemoratives and a very polite note stating, "Am glad to help you out, but this is all I can do for you; please do not contact me again."
NEW ARRIVALS

ATARI SCANNER LOG

A new program for the Atari home computer, now allows the "Game Player" 400/800/1200XL/600XL/800XL Atari Home computer to log your scanner frequencies in fields such as FREQUENCY-CALL-AGENCY-LOCATION-USE-BASE/MOBILE-PAIR, or any other field that you wish to create -- this program is "USER FRIENDLY."

Other options include: the use of any most any printer to print 40-80-7 columns; and LOAD-SAVE-DELETE-SORT by FIELD-and PRINT ON SCREEN/PRINTER BY FIELD-DISPLAY ALL/SELECTED RECORDS.

Program and files can be saved to either disk or cassette. The program for the most part is in Basic, so changes can be made if needed. It will run in 16 K or 48 K.

This USER FRIENDLY program is available from C & Electronics in cassette mode only (at present) for $19.95.

Fun from Moscow

By D. K. deNeuf, WALSMP

During the 1942/1944 W42 years, Press Wireless at New York had a direct HF radio circuit for press messages from Moscow which was commonly capable of handling traffic at speeds of over 400 words per minute. Shown below is a strip of 400 WPM incoming siphon recorder tape. Sometimes in between messages a Russian operator's personal comment to our guys would show up -- still at 400 WPM:

Many old hands don't need to be told what this says, but anyway it reads: "I THINK THAT YOU IS VERY VERY YOUNG BOY AND VERY GAY YO SO?!

Just to keep things in perspective, back in those days Webster defined "gay" as meaning "joyous, lively, merry, happy, or light-hearted"! How the meaning of some words change over the years! And remember when POT used to be something you cooked in, bet on, or planted flowers in?

STONEHENGE STILL A MYSTERY

By Bob Grove

For thousands of years the giant circle of stones have stood mutely on the Salisbury plain, dutifully marking astronomical events with delicate shafts of light through roughly-hewn notches.

Who were the prehistoric inhabitants of this on a top quality cassette in a crush proof box.

Write C & S Electronics, 10 Avalon Road, Dept. MT, Mt Vernon, Ohio 43050. SASE appreciated.

FOR THE CONSUMATE PARANOID

Believe it or not, the accompanying illustration actually exists, reprinted exactly as it appears in advertising. Whether or not the intended user actually needs all of the electronic artillery is a moot point; apparently there are those out there who buy it!

This and other products are available from CCS Communications Control, Inc., 633 Third Avenue, Dept. MT, New York, NY 10017. A complete catalog is available for $50, applicable toward your first purchase...

DXER's DIRECTORY

Most radio listeners are undertaking their hobby in a vacuum -- out of touch with other listeners in their locale. Few would argue that the DXing hobby is more enjoyable and productive when you know other listeners in your area with whom you can discuss mutual interests. The problem has always been; How do you find other listeners with similar interests in your area?

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We need your help to make it happen! WE WANT TO INCLUDE YOU IN THE NEXT EDITION. Please send a SASE to receive your free registration form. Your listing will be without charge. You will be notified when the directory is available, but you are under NO OBLIGATION to buy one. It costs nothing to be listed. We will even include a photo of you and/or your "shack" if you care to send one! We would like your information whether you wish to buy the directory or not. So help us bring DXers together! Send a SASE for full info.

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The aircraft

Globe Scan
corner called "Globe Scan" (model CVR-2; see accompanying ad on this page). It provides a 2-22 MHz international broadcast band coverage when used in conjunction with any programmable scanner with the 118-136 MHz aircraft band.

As shown in the accompanying schematic diagram, the third harmonic (114 MHz) of a 38 MHz crystal oscillator is injected into a double-balanced mixer where the 4-22 MHz shortwave spectrum is up-converted to 118-136 MHz (AM) for reception on a scanner.

Subsequent experiments have shown that additional frequency ranges are possible with this clever converter.

But There's a Trick

The ability of the converter to provide several additional ranges of frequencies is due to the harmonic nature of the crystal oscillator; all of those additional ranges are received simultaneously!

Clearly, then, some form of filtering is needed to restrict the reception to one band at a time. That choice is up to the user.

Fresh out of the box, the Globe Scan will receive 4-22 MHz when connected between a shortwave antenna and the scanner. But hooked to a scanner antenna, the Globe Scan will allow any general coverage shortwave receiver to hear 30-144 MHz (in various increments) with approximately 0.25 microvolt sensitivity.

The trick is in constructing appropriate filters to remove the frequency ranges which would be heard simultaneously, allowing single-band reception.

The filters could be

scanning receivers may be found by adding or subtracting the frequencies of the oscillator and its harmonics (38, 76, 114, etc. MHz) to and from the normal receiving ranges.

For example, a scanner which normally tunes 144-174 MHz may be enhanced with the Globe Scan to receive 30-60, 68-98, 106-136, 182-212, 220-250 and 258-288 MHz.

Tuning Tips

Several schemes are possible to restrict the input signals only to the frequencies of interest. These include wave traps, band reject or bandpass filters, tunable notch filters and peaking filters. Experimenters may wish to try variations of these to suit their own requirements. Start out with 6-10 turns of solid wire, 1/2" diameter and a 2-20 pf tuning capacitor or trimmer for the 50-150 MHz range.

CLUB CORNER

Paul Swearingen
7310 Ensign Ave
Sun Valley, CA 91352

Editor Emilio Pedro Ponzoncino notes that DX'ing in Argentina is much more difficult than in northern hemisphere countries because of relatively poor propagation, monthly incomes of from about $170 to $270 for most DX'ers, and the 20 to 25% monthly inflation rate, keeping DX'ers who can both purchase equipment and subscribe to a DX club magazine to a minimum.

Nevertheless, ADX continues to publish a monthly bulletin in Spanish and a separate bimonthly condensed DX listing in English, both covering all bands. The club...
The Society to Preserve the Engrossing Enjoyment of DX'ing (SPEEDX) has been serving short wave listeners for over 14 years. Available to anyone on a yearly subscription basis, SPEEDX’s monthly bulletin aims to bring together all those whose hobby is short wave DX and to share their knowledge. The offset magazine is generally 60 pages or so in length and includes both loggings and articles covering all aspects of the hobby.

Membership status in SPEEDX is unique. The “associate member” is simply a subscriber. “Full membership” goes to those who also contribute occasionally to the monthly bulletin; voting privileges accompany full membership. Thus novices are encouraged to take an active part in the club as they become more experienced.

A sample copy of SPEEDX plus an information sheet may be yours for $1.50 or 8 IRC’s outside of North America; a one-year subscription costs US $18.00 (first class to North America; surface mail to other countries; more for airmail to other countries). Write to SPEEDX - 7738 E. Hampton St. Tucson, AZ 85713 and you’ll have a speedy (pun intended, but accurate) reply from Business Manager Jack Sanderson.

A Few happenings for DXers in the near future:

Oct. 27: Fourth Annual Ontario DX Association Open House (send an SASE to ODXA 3 Cambridge Crescent, Scarborough, ON Canada MI 2B5, for exact location)

Nov. 9-11: Hobby ’84 Show at the International Centre, Halton, ON

Nov. 10: 8th Annual York Region Amateur Radio Club Fleamarket, Newmarket Community Centre, Civic Drive, ON.

And looking ahead to next year, ARARC ’85 will be hosted in Milwaukee July 19-21 by the National Radio Club after a hugely successful ‘84 convention in Oakridge, ON.

Now, if you feel that the above datelines have a distinctive Canadian flavor, then it’s because “DX Ontario” is the only bulletin we’ve received this month which has information far enough ahead of Club Corner’s and MT’s deadlines to make it into the column.

Club Corner’s deadline for information is the 15th of each month for happenings after the 25th (or so) of the next month; in other words, we’ll print your club’s events after December 25 if they reach me by November 10. And space permitting, we’ll list events sponsored by any legitimate club, large or small. Until next month - good DX to all!

The 757 Club

John Dowlan, W3HU, Corresponding Secretary of the 757 Club International, has announced a newsletter which will include monthly items of general interest to all Yaesu FT-757GX owners including letters from owners, technical problems and corrections, modifications, computer subjects, and a swap column.

Rounding out the format is a special section for DX short wave listening to acquaint readers with the fascination of monitoring the high frequency spectrum. Owners of the FT-757GX are encouraged to participate in the 757 Club activities, awards program, weekly nets and personal involvement with the club newsletter. Membership is free!

Due to space considerations this 757 Club lifetime charter membership number and complete details about the club will not be included in this issue. Please send a self addressed stamped envelope (foreign: 2 IRC’s) to 757 Club, Box 52021-B, Spring Hill, Florida 33526 U.S.A.

The Domestic Log has remained the consumate reference guide for 540-1600 KHz medium wave North American DXers.

Cross referenced by frequency and call letters, the log contains locations, addresses, program formats and air schedules stamped envelope (foreign: 2 IRC’s) to American Radio History, 301 South 15th Street, Suite 312, Des Moines, IOWA 50309.

Antique Radios Restoration and price guide by David and Betty Johnson (8-1/2”x11”, 99 pages, soft-bound; $10.95 from Wallace-Homestead Book Co., P. O. Box 6500, Dept. MT, Chicago, IL 60680).

Profusely illustrated with product photos, this excellent guide traces the production of dozens of American radios from the 1920’s into the 1950’s.

Reprints of early ads, parts lists and descriptions, a chart of early radio theory and tube pin diagrams are combined with discussions on how to choose a candidate for restoration.
**LIBRARY SHELF**

actual restoration procedures and a pricing guide.

For the flea market addict, this book is invaluable. And for those of use who remember these radios while they were still plugged in, the modest cost of the book is more than compensated for in the nostalgia.

**THE CCS SURVIVAL CATALOG** (64 pages, 6” x 12” glossy, softbound; $50–applicable toward first purchase—from Communication Control, Inc., 633 Third Avenue, Dept. MT, New York, NY 10017). Directed toward the professional surveillance and electronic countermeasures industry, the CCS Survival Catalog is a photo-essay of their own products written in English, French, Spanish, and Arabic.

Over 80 products from bug detectors to scramblers, long-range broadcasters to spectrum-displaying detectors, portable communication systems to telephone line analysers, alarm systems to lie detectors, and bullet-proof vest to bullet-proof cars—they’re all here.

Since the product details are proprietary, only skimpy applications information is supplied; prices are available upon further inquiry. But it doesn’t take much imagination to visualize the intended applications for these products.

**DESIGNING, BUILDING AND TESTING YOUR OWN SPEAKER SYSTEM with projects; 2nd edition, by David Weenas (5” x 8”, 190 pages, softbound; $9.95 from TAB Books, Inc., Dept. MT, Blue Ridge Summit, PA 17214).**

Sure; it’s easy to go into Radio Shack and buy a component stereo system, but there are still many of us out there who want to know a little more about how speaker systems are designed and built.

How is impedance determined? What is the difference between a public address system and a musical instrument system? How do damping and airight enclosures help? What types of speakers are available for which enclosures? Where are speaker systems placed in different rooms for the best sound?

There are just some of the questions discussed and answered by Weenas. A handy index allows quick access to discussions of interest.

**SCANNER RADIO LISTINGS** by Norm Schrein (Two new editions: Toledo, Ohio, and San Antonio area; also from Fox Marketing, 4518 Taylorsville Rd., Dept. MT, Dayton, OH 45424).

We have thoroughly discussed the Fox, Pacer, and scanner directories in previous editions of MT, so we shall only add here that these two new releases follow the same pattern of excellence and accuracy: 125 or more pages, 8-1/2” x 11”, cross referenced by name of service, call sign, type of service, etc.

While the Toledo edition is an updated version of an earlier publication by Schrein, the San Diego book is entirely new, featuring large numbers of northern Mexico operations—a first for scanner directories.

**BROADCASTING...**

**HANK BENNETT ON SHORTWAVE**

There is a great deal that can be said on the subject of nostalgia as it relates to old-time radio. To rural school of thought maintains that the past is past and let it stay as it is. Others—many others—are in the nostalgia business. Let’s state the facts of life for these days, making money hand over fist as a direct result of things that were said, done, or sung in the time period of last week to well, almost to the last century.

Look at all of the radio stations that are making fulltime features of big band music. Many stations are devoting full evenings to many of the oldtime network shows. And these stations are drawing good audience numbers with more and more hits and bits of our lives as they were many years ago.

As previously promised, we have a very large list of stations that we are going to begin this month. I will not positively guarantee that every answer is correct although we have made every effort to assure the accuracy. I’ve had some help on these stations, not only from XYL Mea, but from daughter Marjorie, her husband Bruce, and her sidekick, Helen Porter from Mattapoisett, Massachusetts and a few of the guys that I work with at the post office.

We are trying to give the consumers of shortwave a chance to communicate with the stations. We have had a very limited response to this request and I am asking you to join in this effort, to communicate with the stations.

**ECHOES FROM THE PAST**

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**SCIENCE FRONTIERS** (monthly newsletter; free: 10 issues per year from the Sourcebook Project, P.O. Box 107, Dept. MT, Glen Arm, MD 21057).

Free sample available for S.A.S.E.

One of the most interesting publications to cross our desk is this little four-page newsletter generated by Mark Farrah of the Vojta Research Institute which appears in respected journals worldwide.

All too often, scientists fear ridicule when discussing publicly topics on the paranormal, UFO’s, and even unexplored (yes, there are still some) areas of original research.

[Mark Farrah offers a vast library of publications dealing with hard-to-find topics, painstakingly researched. If you have an unbridled curiosity about this incredible universe, you owe it to yourself to get on his mailing list.]
This month we will take a look at the subject of SPORTS BROADCASTING from around the world. Of course the topic includes results & scores, interviews with famous personalities, and direct commentaries of sporting events as they occur.

The latter aspect is difficult to give any precise information on, since it depends on the season and exact dates for outside broadcasts on such diverse activities as baseball, tennis, football, soccer and cricket!

Often major events are the subject of special time allocations by various radio stations; obviously, example is Wimbledon tennis championships from the B.B.C., cricket "test" matches from Radio Australia and Radio New Zealand, and so on.

In the past both Australia and New Zealand have put special transmitters on the air at such times, using extra frequencies. I would advise listeners to check out the 16/19 meter bands at times when cricket is being played, if you are interested in this sport. For Wimbledon the B.B.C. publishes well ahead of time the special commentary periods in their monthly bulletin "London Calling."

With regard to the more regular programs of sports results and analysis, we can be more sure of station times and frequencies. Let's take a look at some of the more useful station schedules.

HCJB Tries International Call-in Program

Quito, Ecuador—International shortwave station HCJB, The Voice of the Andes, broadcast live telephone call-in programs in August and October. The programs were carried to all HCJB target areas during the time periods normally reserved for the PASSPORT magazine program.

Listeners were able to ask questions of program host Ken MacHarg, DX Party Line host John Beck, news director Brian Seeley, and English Service director Glen Volkhardt. Most of the callers were regular HCJB listeners although a few people phoned who had never heard of The Voice of the Andes, having been intrigued with the idea of an international call-in show.

The program came off with a minimum of technical difficulties and plans are now underway for another DX Party Line call-in program in November and a Christmas call-in for December.

HCJB, The Voice of the Andes

PASSPORT

Radio Australia

5995 6035 6045 6060 6080 9770 11805 11820 15120 15120 15145 15160 15240 15310 15320 17795 17870 21720 at different times.

"Sports Magazine" is on FRIDAYS 1640; SATURDAYS 2240; SUNDAYS 0440 U.T.C.

"Saturday Sports" from around Australia is scheduled on 0200-0730 and the frequencies used to be 15145/15240 kHz, but this requires checking in case of propagational changes.

Austria (5965/9770 kHz)

ORTF in Vienna features sports news on TUESDAYS in their program "Report from Austria" at 0130, 0330 and 0630 to North America. These are half-hour programs but not necessarily all sport in content. The part we are concerned with is called "Sport Review."

Brasil (15290 kHz)

Radio Nacional do Brasil has its sports schedule for MONDAYS as the main feature of the evening program to North America at 0215 hours. Your editor heard a fine commentary the other day on soccer in that land, the program being entitled "Sports in Brazil."

ACCESSIONS

NRD515 96 ch. memory...$239

CFL230 filter...$69.95

NCM515 controller...$179

CFL260 filter...$54.99

Color brochure available...CFL218 filter...$89.95

CALL TODAY TOLL FREE

1-800-438-8155

GROVE ENTERPRISES

POB 98, Brasstown, NC 28902

704-817-9200

Page 19
ENGLISH LANGUAGE BROADCASTS

However, I remind you of the snag! Only ONE frequency, on the 29 meter band!

CANADA
5960 9755; 9650 11955 for Canadians abroad

The trid of "Newsworthy programs" that feature heavily in the programming of Radio Canada International! They open their broadcasts with a half hour section of these topics, but it's not possible to say how much would be devoted to sports at a given time. Naturally, ice-hockey and baseball feature prominently.

There are many English language broadcasts scheduled but those most likely to be heard are for North America: 0000 0200 0300 hours UTC, and for "Canadians Abroad" (In North America at 1200 weekdays).

ISRAEL
7410 9815 11655 to N. America at 0000; others to Europe

Tel Aviv has sports broadcasts on SUNDAYS at 2000 2230 0000 hours, those being EBA transmissions to North America. The program is called "Sports Sunday."

U.S.A. (see below)

I must add to a bias here! In my humble opinion the best sports service on short-wave comes from the A.F.R.T.S.! They have a wonderful selection of programming, much derived from the domestic networks; so if you missed something on the broadcast band local station you may be able to pick up a repeat summary on the Armed Forces stations.

The problem here, however, is where you live and whether you are able to receive the stations at a convenient hour. Transmitters are based in Bethesda, Ohio; Greenville, New Jersey; Delano, California; and Poro, Philippines.

None of the broadcasts is directed to North America, but perhaps the closest is the Caribbean beam. I find the 6030 kHz frequency (scheduled 0100-1300) the best reception in the evenings.

Programs include the following (E.S.T., subject to recent changes):

9023 UPI sportscast
9126 UPI sportscast (SAT)
9143 CBS sportstime
11257 AM AM
1224 UPI sportscan
1227 APR sportscall
1424 AFRTS sports
1433 AFRTS expanded sports
1435 AFRTS expanded sports
1246 CBS sports world round up
1251 ABC sportscast

Far East Broadcasting

Features Multilingual Programming

Interested in hearing exotic languages spoken in their native dialects? Listen in on some of the transmissions from Far East Broadcasting Company's Radio International from Manila in the Philippines.

The fall schedule of this missionary station is listed below; following the published schedule should provide you with a fascinating mixture of tongues from foreign lands when the skip favors propagation from this directional broadcaster.

Power runs 50 or 100 kilowatts, but when conditions are right you will be favored with some interesting sounds!

<table>
<thead>
<tr>
<th>Frequency</th>
<th>UTC Time</th>
<th>Service Area</th>
<th>Language</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1000-1250</td>
<td>Philippines</td>
<td>Tagalog</td>
</tr>
<tr>
<td>6030</td>
<td>2130-2315</td>
<td>Philippines</td>
<td>Tagalog</td>
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<tr>
<td>6030</td>
<td>2300-2315</td>
<td>China</td>
<td>English</td>
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<tr>
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<td>1200-1330</td>
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<td>Hakka</td>
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<td>Cantonese</td>
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An SWL Visits Newfoundland

By Bert Huneault

Last July, my wife, our teenage daughter and I vacationed in Atlantic Canada. We spent a week crossing through the province of Newfoundland, thoroughly enjoying the fabulous scenery which included, among other things, snow cover on some mountains along the northeast coast of the island, and icebergs off the northeast coast.

In the way to Newfoundland, the awe-inspiring size and complexity of Radio Canada International's antenna farm at the transmitter site near Sackville, New Brunswick, sure caught my attention as we drove by on the Trans-Canada Highway.

But for me, two of the high-lights of the trip were visits to a weather station and to a flight service station in Newfoundland. Because both visits are likely to interest SWLs, I'd like to share these two experiences with MT readers.

RTTY Weather Reports from MDN

With my radiotelegraph and home computer, I often
husband Ralph away. There
residence, directed
side and highway with
yieldation
Mountains
island,
would
port),
example, YQX
start
curiousity
answered
Daniel's
this prompted another ques-
discovered
asked myself, "Who
(SA's)
monitor
reported
Wentzell,
VOLMET
broadcast
search
crew,
wind
and
cloud heights.
VOLMET broadcast
explained that they
also use a ceiling projector
and weather balloons for
measuring cloud heights.

VOLMET BROADCASTS AND GANDER
OCEANIC

While visiting the
northeast region of New-
foundland, I made a point of
stopping at the Gander
International Flight Service
Station located in the town of
Gander, not far from the
airport. There, I got a
friendly and enthusiastic
welcome from the Supervisor
on duty, Jack Butt.

I was particularly
interested in visiting this
station because I have been
monitoring Gander Oceanic
communications and Gander
VOLMET broadcasts on HF for
years, and I felt as if I knew
some of these radio
operators!

It's a small community on the
west coast of Newfoundland,
about a third of the way up
the Great Northern Penin-

But this aroused my
curiosity even more... I
knew there is no airport
there, because in Canada
three-letter identifiers for
airport weather stations
start with letter Y (for
example, YQX = Gander Air-
port), while identifiers for
weather stations at non-
airport locations start
letter W. I wondered, who
would operate a weather sta-
tion in that small village?

So, while we were
exploring the west coast of
the island, I decided to
yield to my curiosity and
find out for myself! We
drove north on a scenic
highway with the sea on one
side and the Long Range
Mountains on the other,
until we got to Gander's
Harbour, which turned out to
be a small mining town with
a population of about 800.

A gas station attendant
directed me to the Wentzell
residence, a short distance
away. There I was well
received by Peggy Wentzell,
a young woman who, with her
husband Ralph and another
person, operates the weather
station next door under
contract with Environment
Canada.

We went into the sta-
tion where she showed me
the meteorological instru-
ments and the teletype
terminal. The barograph, wind
speed and direction
indicators, mercury barometer,
and weather balloons
instantly brought back
memories of the late forties
when I worked as a radio
operator/weather observer in
Labrador.

Day and night, hourly
weather reports from WDH are
transmitted by Telex to
Gander, Nfld. From there
they find their way by land-
line and undersea cable to
Halifax where they are
included in CHF's RTTY
broadcasts. WDH also sup-
plies a synoptic observation
every six hours.

In the yard outside the
station, one can see an
anemometer and wind
vane at the top of a tower,
a Stevenson screen housing
thermometers, a rain gauge,
a snow gauge and a solar
radiation (sunshine)
measuring instrument. Mrs.
Wentzell explained that they
also use a ceiling projector
and weather balloons for
measuring cloud heights.

VOLMET BROADCASTS AND GANDER
OCEANIC

While visiting the
northeast region of New-
foundland, I made a point of
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years, and I felt as if I knew
some of these radio
operators!

The Power Ant, unlike
many preamps, actually
lives up to—or exceeds—
the specifications. I am
highly impressed with your
quality products and ser-
vice." (R. Kienzle, PA)

"I ordered one of
your Power Ants and I was
skeptical. Praise be! It
was the perfect answer to
my problems. I have at
least tripled the number
of stations received and
improved the quality of
the reception consider-
ably." (G. Jacobs, NY)

Install it between your scanner and antenna cable
to boost incoming signals, or plug in the optional
telescoping whip and use it as a stand-alone indoor
active antenna! (ANT-3 Plug-in TELESCOPING WHIP ANTEN-
NA, only $29) (Retail $69)

Convenient front panel control allows you to
custom select optimum amplification setting for hot
reception of those distant, weak signals.

Guaranteed to improve reception on any receiver,
30-1300 MHz. (Not for Short-wave use.) AC adaptor,
interconnect cable and full instructions included.

CALL TODAY TOLL FREE
1-800-438-8155

GROVE ENTERPRISES
POB 98, Brasstown, NC 28902 704-837-9200

Mrs. Peggy Wentzell with weather instruments at WDH
PIRATE RADIO

by John Santosuosso

Radio ANTORCHA MARTIANA:
Among the most important recent events in clandestine broadcasting was the August return of anti-Castro RADIO ANTORCHA MARTIANA. The station had been silent for two and one-half years.

Movimiento Insurreccional Martiano is the operating organization, a group which has not sought publicity as have some of the other Cuban exile groups. Rumors also abound that some of its leadership is linked to the much-feared Omega Seven.

In any case, Radio Antorchta Martiana made its first broadcast about three years ago when Cuban-exile radio activity was at a peak. Its return could possibly mean that other stations will do the same thing.

Broadcasts normally appear to follow a Monday-Wednesday-Friday eastern time schedule with sign-on at approximately 9:00 p.m.

"The long way," he said, "via transatlantic cable from Newfoundland to Den-
mark; and from there, undersea cable again, to Greenland." (Readers may recall that Greenland is a province of Denmark.)
He also pointed out that the quality of air/ground communications over this arctic VHF link is far superior to the single-sided service with which most SWLs associate Gander Oceanic.

I enjoyed my visit to the Flight Service Station, and especially appreciated the welcome extended to me. The reception I got was typical of the Newfoundland hospitality we experienced elsewhere in the island.

Now, when I listen to VOLMET broadcasts or Gander Oceanic air to ground communications I can relate to the place and readily visualize the room where all the action takes place.

By the way, the accompanying list of frequencies was kindly provided by Jack But. If you’re reading this, Jack, thanks again!

GANDER VOLMET (kHz)
3485 6604 10051 13270
GANDER OCEANIC A/G (kHz)
2899 2962 2971 3016 4675 5598 5616 5649 8825 8884 8879 8891 11279 13291 13306 17946

The VOLMET weather broadcast console

They are usually about 15 to 20 minutes in length on a frequency of 7080 kilohertz.

Signal strength is not as strong as when the station was last active, but this may be due to technical problems rather than a new transmitting site. If a tape or pre-
pared card is enclosed, occasionally some reception reports are verified. The address is P.O. Box 440491, Miami, FL 33144.

IRAN: Sometime this past summer a most unusual clandestine radio broadcast was made inside Iran. Followers of Mawad Rajaev, who leads the anti-Khomeini Mujaheddin-e-Khalq from his Paris headquarters, were able to make a broadcast over one of the Iranian Army channels by which they called for the soldiers to stop fighting the Iraqis.

An unusual source of news for those interested in Iran is a target for our clandestine broadcasting in the newspaper Kayhan. Although printed in and mailed from the United States, it is published in Tehran where its editorial offices are located.

The paper is entirely in English; a six-month subscrip-
tion is $16.00 from P.O. Box 7729, Silver Spring, MD 20907.

PROGRAMMING PERSPECTIVE
BY JOHN T. ARTHUR: RTTY Chatters, static roars, a wild siren wails through the noise of 41 meters.
There it is again. No doubt about it. "Your equation for entertainment—RADIO SINE WAVE" is on the air again.

Radio Sine Wave will send a computer drawing of Mount Microtoph to verify correct reception reports sent via Box 5074, Hilo, HI 96720 and which include three 20-cent stamps for reply. Allow adequate time for mail handling, since there is no direct mail service to Microtoph.

THE MINORITY ASSOCIATION: This group has advised us their name has been changed to the Toynbee Associa-
tion. They say they hope to return to the air before the end of the year.
Operations will be on 48 meters with their newly-acquired transmitter. There is also a possibility that they may soon have a new mailing address, and we will keep our readers advised of such changes.

The Toynbee Association states it is going ahead with plans for FM transmis-
sions in the Moscow and Leningrad areas of the USSR, although they broadcast are still some months away. Should they be suc-
sessful in accomplishing this goal, we will report the details at a later date.

For those not familiar with this organization, it has as its stated purpose the colonization of the planet Jupiter with resur-
rected human beings. It claims the writings of the historian Arnold Toynbee inspired this philosophy.

I was pleased the past summer the association was able to make some broadcasts which were relayed by another free radio station since, their old transmitter was not in working order.

We would like to point out that the Toynbee Associa-
tion does not operate and is not affiliated with free radio station Radio Cany-
mede.

ENGLAND: Terry Krueger sends along an article from the August issue of En-
land’s magazine The Face. The publication believes that Britain’s tough new
PIRATE RADIO

anti-pirate legislation, which makes illegal broad-
casting a criminal rather than civil offense, could
end the days of alternate radio.

While admitting that some pirate stations are
boring, it goes on to say that others make a useful
contribution which it would be
unfortunate to lose.

One article points out that the station INVICTA "is
currently the only UK sta-
tion devoting serious air-
time to the burgeoning elec-
tronic hiphop.

Another favorite is the
DREAD BROADCASTING
CORPORATION.

"What this outfit
lacks in money and facili-
ties, it more than make up for in ideas."

We have to agree. It
will be a sad day if free
radio becomes a thing of
the past in Britain or any other
country that
WOSL/KOSL: A Monitoring
Times reader is interested
in knowing who may have
heard of or monitored this
station which operated
around 1600 back in 1972. He
is curious to know how
its 60-watt signal was able
to travel. If you ever log-
ged WOSL/KOSL, or know
someone who did, let us know,
and we will pass the
information along.

LOGGERS: Florida's
Dave Bach, The Rock of America, had a tenta-
tive ID of the clandestine VOICE OF THE UNITED MUSLIM
FIGHTERS of Afghanistan on 11560 kilohertz around 0100
GMT, with programming in Dari. Signal strength was
excellent.

Also from Florida, Terry Krueger heard an
identified Iranian clan-
ded station on 6450 kilo-
hertz around 0230 GMT in Parsi or
some similar language. A warbler
jammer was also present.

Terry heard pirate WBOO "The Rock of America" on
7411 signing off at 0319
GMT on August 19. The
next
night he logged RADIO SINE
WAVE on 7410 around 0200. On
August 25, WBOO was
present on 7428 at 0345.

This columnist notes
that one of the easiest
clandestine stations to
monitor these days is the
LIBYAN PEOPLE which can be
caught afternoon and evening
hours on 13540 with Arabic
programming. In the past it
has used English and Eng-
tlish transmission. There is
jamming from Libya, but
for the most part it is not
effective.

Bill Dunn, Alberta, Canada,
William Dang reports in with
a number of excellent log-
gings. On June 227 from 0825
to 0838 he heard a station
which identified itself by
saying, "Serving the West-
cost on 41 meters, this is
MODERN RADIO."

He also remarks that the
announcers sounded as if
they might have an Austra-
lian or New Zealand accent. He
wonders if any reader might
have an address for this station.

On May 27 Bill managed to
log two other stations:
KQRP was heard with a mail-
bag show and bluegrass music
on 430 kHz and SAMURAI RADIO's 0430 to 0500
show also was received. Bill
is our first contributor from
Canada. What about the
rest of you up there? What are
you hearing?

LATVIA: Another unusual
publication is the bimonthly
Latvian News Digest pub-
lished by the American Lat-
vian Association, Box 4578,
Rockville, MD 20850-0071.
In its July issue it declares that
the VOA broadcasts a 2-
hour Latvian Service program to
Latvia daily. However, recep-
tion is reported to be
rather poor.

The same article claims
more is spent by the USSR on
jamming VOA, RADIO THREE
EUROPE, and RADIO LIBERTY
broadcasts than is budgeted
for producing and transmit-
ning these programs.

A Pirate's Life...
The Victor J. Alcorn
Story
(c) 1984 All Rights Reserved
By William J. Martin

PART ONE

The FCC Press Release
issued on December 9, 1983
seemed too incredible to be
true: ... on November 22,
1983, Victor J. Alcorn of
Sayville, New York was sen-
tenced to 18 months of pro-
bation and ordered to pay a
$750 fine for operating an
unlicensed radio broad-
cast station in violation of
Section 301 of the Commu-
nications Act."

The FCC announcement
explains that Alcorn had been
charged with four separate
counts of unlicensed broad-
casting, each count punishable
by a maximum of up to one
year imprisonment and a fine
of up to $10,000.

In view of the Commis-
sion's well established
powers to impose monetary
forfeitures instead of bringing
criminal charges against pirate
radio broadcasters, the early
Alcorn case was puzzling. Just
what did this pirate radio opera-
tor do to provoke the FCC
and Department of Justice into
bringing four criminal
charges against him? How did
Alcorn come to be the only
person within at least the
last ten years to be convicted of
operating an unlicensed pirate
radio station?

THE BEGINNINGS: WPTO-FM

The station of dynasty is
located along the Atlantic
shore of Long Island near
such communities as Islip,
Patchogue and Bay Shore. As
station WPTO was the first
radio station on Long Island.

The station itself was formed
1944 with the help of
Mr. and Mrs. Kenneth
V. Knowles.

Radio Times articles begin
with the first call letters
"PTO" for Patchogue
Station.

The new owners and
city fathers were among
those who have had to

The FCC did not have
long to wait. At 10:20 p.m.
the evening of March 4, 1981
William Suffa was notified
by the FAA that WPTO had
again been heard on 108.5
MHz that evening, but that
the station had closed down
at approximately 9:30 p.m.

An FAA employee had even
contacted the station over a
telephone company
loop line during the broad-
cast and the FAA engineer
was informed that WPTO's
signals were causing interference to the
ILS frequency, and that the
FCC had been called into
the case.

WPTO returned the air
on March 5, 1981 at
approximately 3:10 p.m. On
this day, however, FCC engi-
neers Judah Mansbach and
Daniel Noel were operating in
the area and were able to
conduct a close-in DF of the
station. Mansbach and Noel
determined that the signals
were being heard from the Say-
ville area.

Amazingly, during this
broadcast WPTO made several
on-the-air references to the
FCC: "I know that it knew we
were still on the air."

On March 6, 1981 Suffa and
Noel drove from New York
City to Sayville and again
monitored WPTO's signal; how-
ever, the station ap-

cantly left the air after
announcing that "the FCC
guys in the glasses and the
long coat (referring to
Suffa and Noel after our
station again)"

Suffa and Noel returned to
Sayville at 1:00 p.m. on
March 7, 1981 and during the
next afternoon monitored the
entire FM broadcast band in
search of WPTO. Although
WPTO was not heard, the
engineers did log an un-
licensed radio station using the
call letters "WBOO on
105.561 MHz. The station
used the same programming
format as WPTO: rock music
and requesting listeners
to telephone the station via
a loop line.

The engineers used the
cassette tape recorder in
their investigative vehicle
to make a monitoring tape of
WBOO. Subsequent comparison
of that tape recording and
that of WPTO seemed to
suggest that "Zimmy, Noel, Suffa
and Mansbach led the FCC to
conclude that WPTO and WBOO
were one and the same."

August 19, 1981, Daniel
Noel successfully DF'd the
WBOO signals to a two story
residence on Dunn Court in Sayville.
A PIRATE'S LIFE
side of that house they observed a blue van with a painted "WPOT" sign on its rear door. The FAA had previously advised the engineers that WPOT claimed to operate from a house in St. Simons. After making a note of the van's license number both engineers went to the front of the house and were permitted entry by a man whose brother, it was later learned, owned the residence.

This man advised the engineers that his brother ran WPOT. He contacted Victor Alcorn and that Mr. Alcorn owned the blue van. After explaining the purpose of their visit, the FCC engineers asked to go up and inspect the station.

Although Alcorn refused to come upstairs to speak with Noel and Sufia, bringing with him a small wireless FM microphone which he claimed to have obtained by connecting it to a record turntable and his television antenna. This, according to Alcorn, was the WBLO transmitter.

The engineers were skeptical of that claim, particularly since Alcorn denied any connection with WPOT yet could not explain why the WPOT letters were painted across his blue van.

Since Alcorn said that he could not read, the engineers did not even attempt to obtain a written statement from him with respect to the unlicensed operation of WBLO. Alcorn was verbally warned that operation of the radio station violated the provisions of Section 301 and 501 of the Communications Act of 1934.

Sufia and Noel returned to Dunn Court two days later to deliver a written warning letter to Alcorn; however, Alcorn refused to accept the four-page letter. He accused the engineers of harassing him. Alcorn advised the engineers that he had contacted Newday, a local Long Island newspaper, and threatened to publicize his underground station and complain about FCC harassment.

Shortly thereafter the Newday reporter for the FCC was contacted by Mark McIntyre, a reporter for Newday, who requested information regarding the Alcorn bust. Since the case was classified, the FCC refused further comment. For his part, McIntyre volunteered to Alex Zimny that Alcorn had admitted to him that he had operated WPOT on the 108.5 MHz frequency for approximately 6 months.

Newday did run a short story pertaining to the Alcorn bust on March 12, 1981. Following the caption, "Radio Freak Bows to FCC, Leaves Air" in which Alcorn admitted his unlicensed operations but was quoted as saying, "I did a good job. The people loved me out there. I kept the kids home on Friday nights."

Alcorn indicated to Newday that he would stop broadcasting for good. Being; however, he left open the possibility that he would return to the airwaves, and stated "I'm not going to do it right away for a good six months because the heat's around!"

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A furtive informant who shall only be identified as "Deep Thought" and who purports to have certain very mysterious information about those weak and erratic CW signals in early 1968 from a radio station on the last known frequency of the Scorpion gave me a call just a few days ago.

According to "Deep Thought," the signals were WPOT and not to be taken as once reported by various government officials. His report was especially disconcerting as I have been hearing veiled hints of a Scorpion over-airing over the past few weeks.

In brief -- IF -- (I stress the word IF) my memory serves me correctly, the last known visual sighting of the Scorpion was when this vessel passed near Gibraltar about the middle of May 1968.

According to a very reliable source, the LAST KNOWN voice communications with the Scorpion was with the USS Bighelor just a short time later. The Bigelow (call sign NICY) radio operators reported that the Scorpion traffic was of a questionable nature -- nothing unusual.

Several days later the Scorpion was reported overdue at Norfolk. It was during this massive search effort that Arizona based radio operators and monitors reported the intercept of weak, strange and erratic CW signals.

The call used by this mysterious station was -- Brandywine-- the tactical ID of the USS Scorpion! It's also been reported that some U.S. Amateur radio operators and SWL's reported these transmissions.

According to "Deep Thought" and other reliable authorities these transmissions might very well have been from a HOSTILE source!

A more detailed report is now in the research stage and -- hopefully-- will be ready for publication in Monitoring Times in a few months.

WAS THIS AN UNDERWATER VERSION OF KAL-007?
May 17, 1968 -- THE ATLANTIC OCEAN. The USS Scorpion was reported overdue at Norfolk, VA.

The nuclear submarine, with soul stirring music, was last heard from on May 21. It was south of the Azores at the time.

UNUSUAL INCIDENT
A 3-DIGIT SPANISH SINULCAST? This highly unusual incident happened at 01002 on 4030 kHz (an established frequency) and 4759 kHz on August 21, 1984. The 4759 kHz signal although much weaker than 4030 kHz, was heard on two different receivers! I'm certain that this intercept incident was not a receiver idiosyncrasy. Readers are reminded that UNUSUAL INCIDENT reports ARE solicited by this column. Reports should --if possible-- be "numbers" related.

Havana Moon's Mailbag

Here's a portion of a letter that readers will find most interesting: "I am writing you, Havana NUMEROS readers re the elements of cryptanalysis is certainly a worthwhile endeavor. Anything that could possibly contribute to the production of some solid information concerning procedures of any of the numbers stations would be the most interesting development in that area since the SWL mags started reporting on them twenty years ago."

"But it has occurred to me that a more effective program in that direction might be as follows: "Let's recall that there are already enough hobbyists in the USA to support at least three, maybe more, crypto magazines... "...the upshot to all of this is that the crypto mags are under the wrong impression that we can learn much about the numbers stations in the near future, unless we SWL's take some further action."

"SWL's should bombard the Crypto Mag editors with letters encouraging the editors to let their readers know the numbers station story..."

(name and address withheld)

Sounds like a great idea!

Florida's Frank Ingle checks in with some most interesting "numbers" material. This Jacksonville based monitor mentions my article in the May 23 edition of Monitoring Times in which I mentioned a tip that "numbers" transmissions were being originated from a naval facility near the NC border. In Virginia.

It turns out that Mr. Ingle is very familiar with that facility and has reason to believe that my source was correct. As a target. Mr. Ingle's full comments appear on page 3 of the October issue of Monitoring Times.
LOS NUMEROS

well as other readers--might acquire a copy of The Death Merchant by Joseph C. Goulden. This chilling work is published by Simon and Schuster and deals with CIA intrigue, international terrorism and the shadowy world of a renegade former CIA officer. This true story is more frightening than any spy fiction by Le Carre or Robert Ludlum.

Thanks for all the kind words, Zel. Did you ever think about a career as a professional Intelligence Officer?

INTERCEPTS

Next we have Greg Doerschler of Massachusetts with some very interesting loggings. Greg's Worcester intercepts include:

11685 kHz 05252 06/13/84 English -- no accent, female with 4-digit groups.
11437 kHz 05422 06/13/84 Spanish, female with 6-digit groups.
9665 kHz 05262 06/20/84 English, female with no accent reading 4-digit groups. Mode was Reduced Carrier 05302 06/22/84 Unknown language, German sounding female with 5-digit groups. Female preceded by repeating musical sequence -- flute sounding instrument-- and voice in unknown language -- "Kilo!"

Very nice, Greg. Let's have some more from you and other readers. I'd much rather read your intercepts than mine.

By the way, Greg, the Chinese food at THE PEKING GARDENS in Concord is just too much for words. Try it sometime.

I'll be in your area in a few weeks for another great visit. Great state you live in.

ANOTHER REVELATION

Richard Rush calls Oak Ridge home and sends a copy of a very interesting article that's in the May/June 1984 issue (Vol. 24, No. 3) of The Sciences published by the New York Academy of Sciences. The last part discusses "numbers" transmissions and that they may be transmissions of "one-time-pads." I'm in total disagreement, Richard. I'll go into the reasons in a future column.

I'll take the liberty of quoting a brief portion of this article by Mr. Alan L. Mackay.

"...turning on an ordinary radio in Britain, one can find stations as sinister as the Enigma traffic. On them, a woman's voice endlessly intones groups of five-figure numbers in German, English, or Russian (emphasis mine).

"These are the "numbers" stations that must be transmitting in code, perhaps from somewhere like Magdeburg, near the border of East Germany, to agents in other countries..."

Mr. Mackay mentions the frequency of 13,775 KHz as being very active with these type transmissions.

Thanks for the contribution, Richard. How about being a regular? Information of this type is just what I'm looking for.

I might mention that Alan Mackay is a reader in crystallography at Birbeck College, University of London. He is the author of Scientific Quotations as well as other works.

WHAT THE X248X IS GOING ON IN FINLAND?

I continue to hear rumors of STRANGE intercepts from the Sunshine State! How about some Miami, Key West, Tampa, Ft. Lauderdale monitors checking in? Are you people REALLY on top of a 5-digit "numbers" transmitter? I thought all (?) "numbers" transmissions originated from a site near Havana, Cuba!

PENTHOUSE

Be sure to pick up a copy of the October edition of Penthouse. Your reason will be for the photos but for Dr. David Kahn's highly revealing article on the KGB nannies and the sinister Glen Cove mansion. I feel that his very best. MUST READING.

TO THE READER THAT WAS NOT SURE

It's Mr. and not Mrs. or Miss.

TRIVIA TIME

Remember when most 5-digit Spanish transmissions terminated with "FILE" rather than the current terminator? It really hasn't been all that long ago.

Readers are cordially invited to submit "numbers" or other communications related trivia to this column.

TRADECAST AND FOR THE CRYPIES

These two features will not be presented this month due to space limitations. A unique crypto system is in the works for the next issue, unique in the respect that so-called "agents" have no need to access any prepared material for deciphering of coded transmissions. The entire system can be memorized in just a short time. You'll find it most revealing in may respects.

Readers are reminded that TRADECAST AND FOR THE CRYPIES are for ENTERTAINMENT purposes only.

“EAVES-DROPPING”

By Donald K. deNeuf

We knew that the enemy was monitoring all of our international radio-telephone channels, despite the sophisticated voice-scramblers which "inverted" speech and converted high tones into low ones and vice-versa. Only authorized persons were permitted to use

ABBREVIATIONS USED

h=heard/verified by Bob Parnas
0=heard/verified by other listeners
 p=listed in print media, not queried
 it=in-littera station
 m=mobile only, repeater
 pg=pggaging frequency
 2w=low power transmitters

<table>
<thead>
<tr>
<th>Frequency (KHz)</th>
<th>Call Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>461.0500</td>
<td>KNEU44</td>
</tr>
<tr>
<td>461.2750</td>
<td></td>
</tr>
<tr>
<td>466.0250</td>
<td>KNEU47</td>
</tr>
<tr>
<td>154.6000</td>
<td>K29312</td>
</tr>
<tr>
<td>659.7500</td>
<td></td>
</tr>
<tr>
<td>123.3000</td>
<td>KN7675</td>
</tr>
<tr>
<td>123.5000</td>
<td>KN7685</td>
</tr>
<tr>
<td>154.6000</td>
<td>KB29116</td>
</tr>
<tr>
<td>151.9550</td>
<td>KA69260</td>
</tr>
<tr>
<td>151.6250</td>
<td>KA69427</td>
</tr>
</tbody>
</table>
"EAVESDROPPING"

Generals Eisenhower and Marshall as two of them - at least sometimes. I can remember the circuits between Washington and London happened to be very poor in quality and "understandability" was stretched to the utmost.

General Marshall in Washington had General Eisenhower on the line in London who couldn't understand what Marshall was saying. Marshall repeated several time "Ike, this is GCM - Marshall - GCM got it?" without results. Finally in frustration Marshall turned to an aide and could be plainly heard to say "What's the code word for my name?"

The next thing we knew Marshall was slowly and distinctly repeating his code name interspersed with "GCM" and "Marshall." Of course we had the code book and notify the code group in Washington to immediately "bust" the code - we couldn't take any chances - really. We would have lost our job for his name might have been all the enemy intelligence was waiting for to help "code-break" other communications.

On the other hand, President Roosevelt and Prime Minister Churchill were two of the best and easiest to monitor. Both used codes and code words which were previously-transmitted overhead messages by numbers and most of the conversation was along the lines, "Well, Winston, what I really don't think we should do that - you know how they are." Nobody could gain any information from listening to their telephone conversations.

I always enjoyed listening to Sir Winston originating a call. The British telephone operators were required on every connection to announce in advance of a conversation, "You are warned not to mention the names, dates, cables, weather (etc. etc.) - any violation on your part will result in the circuit being cut off and connection reported to the highest authority. Do you understand?" Sir Winston always dolly replied, "Yes, ma'am; I understand."

LISTENERS LOG

Martin, Mark Racing (USA-wide).......................... 463.4000 KCKP944
Marsh Racing (USA-wide)............................... 464.0500 KB33210
Medinah Country Club, sports (Medinah).................. 151.6550 KGR345
Midwest Regional Gun, sports (USA-wide)................ 154.6000 KE24275
Milwaukee Sports Svc (USA-wide)........................ 469.5000 KE28185
Mock, Ray, racing...................................... 468.9750 KU4096
Motion Raceway Park, Rochelle Il, sports (USA-wide)... 465.6000 KU3989
Mt Lawn Speedway, sports................................ 154.6000 KA70237
NASCAR auto races, sports (USA-wide)................... 464.5000 KU9996
National Hot Rod Assn, sports (USA-wide)................. 151.6250 KU9996
National Jockey Club, sports (Cicero)..................... 154.6000 KZL1768
National Rifle Assn, sports (USA-wide).................... 467.6000 KCA2426
Northshore Ski School, sports (USA-wide)................ 465.5000 KE24275
Olympia Fields Country Club, sports (Illinois)......... 35.0400 KNYB535
P & S Racing (USA-wide).................................. 469.5000 KCB627
Parneil Jones Racing..................................... 468.8250 KME3211
Parrott, Buddy Racing (USA-wide)........................ 466.7500 KU9596
Patrick Racing Team, auto sports racing (USA-wide).... 464.5500 KA95669
Prime Time Racing, sports (USA-wide)..................... 464.6000 KJ95969
Prime Time Racing, sports (USA-wide)..................... 464.5000 KJ95969
Prime Time Racing, sports (USA-wide)..................... 464.5000 KJ95969
Pees Racing (USA-wide).................................. 469.7250 KQ9180
Penske Speedway Inc, auto sports racing (USA-wide).... 154.6000 KY8498
Petty Enterprises Inc, auto racing? (USA-wide)......... 464.7250 KNAP470
Prime Time Racing (USA-wide)............................ 469.7250 KSB2716
Pro Golf Association, sports (Oak Brook)................ 461.6500 KBS9721
Promotions South Inc, entertainment, sports? (USA-wide)... 464.5500 KCB2478
R & S Racing (USA-wide).................................. 464.6000 KB2011
Rideley, Jody, racing..................................... 465.5000 KUR2715
Roosevelt, FDR, double entendre? (USA-wide)............ 469.6125 KGM3895
Rose Racing Inc (USA-wide)................................ 464.5500 KU95969
Rutman, Joe, racing...................................... 151.9250 KGU383
Santa Fe Park Enterprises, sports, entertainment (Hinsdale)... 151.9250 KN30389
Schick Sunt Classic, motorsports? (USA-wide)............. 464.6000 KU345
Shaheen Speedway, sports (Illinois)....................... 154.6000 KA77979
Skip Barber Racing, spotter's iht (USA-wide)............ 151.9250 KA72881
Skool Bandit Racing (USA-wide)........................... 153.1500 KB3192
Sports Car Club of America, Chicago chapter (Chicago)... 151.6250 KB40345
Sports Car Club of America, Raleigh NC (USA-wide)..... 151.6250 KB8971
Sportsman Park (Cicero).................................. 467.7750 KU769
St Louis Drag Boat Assn, sports (USA-wide).............. 151.9250 KA95980
Stadium Motorsports (USA-wide)........................... 151.9500 KA95980
Stadium View Inc, sports? (Illinois)....................... 151.9500 KA95980
Starr Racing (USA-wide).................................. 151.5150 KOT779
Sycamore Speedway, sports (Sycamore)..................... 151.8950 KTY865
Teleview Racing Patrol (USA-wide)........................ 467.8500 KA94576
Tool, James Racing (USA-wide)............................ 464.5500 KA04064
Trevor Boys, racing....................................... 461.1125 KB27154
True Sports Company (USA-wide).......................... 156.5000 KA75440
Tri City Speedway, sports (Illinois)....................... 467.7850 KB29026
Tri State Speedy, sports.................................. 464.6250 KU95969
Ultralight Flying Machines, sports (USA-wide)........... 468.7500 KU95969
United Shows Inc, sports, entertainment (USA-wide)..... 151.6250 KNG7755
United States Ski Team, sports (USA-wide)............... 151.9250 KBR9795
United States Snowmobile, sports/racing? (USA-wide)... 151.9250 KBR9795
Universal Sports Inc (USA-wide)......................... 152.6250 KAD4367
US Auto Club - Speedway, IN, sports (USA-wide)......... 151.6250 KJ9237
US Figure Skating, sports (USA-wide).................... 469.5000 KB3467
US Hockey Team aka/1984 US Hockey Team, sports (USA-wide)... 464.5500 KU944376
Villa Olivia Country Club, sports (Bartlett).............. 151.7150 KB47467
Waukegan Charter Boat, sports (Waukegan)................. 467.8500 KNG783
Wicker Basket Balloon, sports (USA-wide)................ 461.6550 KB38764
Winnetka Golf Club, sports (Winnetka).................... 464.5750 KKN338
Women's Professional Golf Tour, sports (USA-wide)....... 464.5000 KAG7606
YMCA (USA-wide) sports.................................. 457.5250 KU345
Yamaha (USA-wide)........................................ 457.5750 KU345
YMCA, West Suburban (LaGrange) sports................... 457.5750 KU345

YMCA, West Suburban (LaGrange) sports................. 457.5750 KU345

NASCAR RACING CHANNELS

We would like to thank Larry E. Williams of Greenville, South Carolina for sending this next list of channel breakdowns heard during NASCAR racing events.

Another MT reader phoned in two additional frequencies of interest:
462.650 CBS announcers' prompter headsets
151.625 Portable radio control (Dallas)

GRAND NATIONAL DIVISION
460.600 1ST Code.
460.650 #7 CLARK Dyer
460.700 #17 MIKE ALEXANDER
460.750 #52 DUKE MACFARCE
460.800 #61 DAFFEL WHIT
460.850 (ESP-FTCONE)
460.900 (FTCONE)
460.950 #14 RF Poty (1983)
461.000

Another new machine is the Commodore 64, developed
for the home computer market and targeted
at Atari's market of one-, two-, and
four-bit microcomputers. The
basic model is priced at $350
and includes a built-in
video display and keyboard.

NEW ATARI MACHINES

For those of you considering investing in a good
computer, it might be wise
to wait until January when
ATARI Corporation, which
was unsuccessful with its
first attempts at entering the
computer market, has
announced that they will enter
the business and home
computer market with 16- and
32-bit machines to rival the
IBM PCs and the Apple
Macintosh. Atari claims that
their new systems will be
at "rock bottom prices."

Atari plans to intro-
duce these new machines at the
Consumer Electronics
Show in Las Vegas in Jan-
uary. The only system Atari is producing is
the 800XL which is an
8-bit machine.

Atari's Vice President of marketing, James L. Cop-
lund, refused to comment on
the capabilities of these
new machines but did say
that they are to be manufac-
tured and developed by
Atari as opposed to remarketing
machines developed by other
companies under the
Atari name. This is mainly a
marketing necessity as no other
firms can accept the low
prices at which Atari plans
to sell these systems.

Some of the Integrated Circuits that Atari needs
custom-made for the systems
are manufactured by AMIGA
Corporation which has also
announced its own 32-bit
computer system. Commodore
and Amiga recently announced
that they were to merge.

Atari realising that
their main thrust will be
the home computer market
even though these new compu-
ters are geared for busi-
ness. Atari is known best in
the home entertainment
marketplace.

Last year or so Atari
dropped out of the home
computer market when they
lost money due to the
unreliable nature of their
first computers. To date,
the 800XL has been very
successful, selling for
about $170 to compete with
Commodore.

As always, my address for
questions is P.O. Box
203, Roselle Park, NJ 07204.

C-64 DISKS AID RADIO HOBBYISTS

SUPER RAIN LOG

(Codemore 64 disc) by
Eugene Morgan, 1311 Cross
St., Ogden, UT 84404 ($20)

Color graphics and
practical menu are
delightfully


HELPFUL HINTS

SPRAY SHIELDING:

DOES IT REALLY HELP?

With the technology explosion unloading a
array of devices capable of
producing electromagnetic
interference (EMI) and radio
frequency interference (RFI), it is
small wonder that
shortwave and scanner
owners are hearing more
frequently that they


...
GETTING STARTED

Preparing a Verification Report

Reader Craig Wicks of Independent News Watch shares a sample of the verification form he uses to send to international broadcasters. MT readers may wish to use some of his suggestions to customize your own "veri's!"

To Radio Station

I AM PLEASED TO REPORT RECEIPTION

Your verification (by card or letter) would be much appreciated.
On __________, 19__ on or about ________ kilohertz

This reception report constitutes a request for a verification which I need in order to qualify for one or more certificates of achievement. If it is complete and accurate, I hope that you will be kind enough to comply. Should it be necessary to deny the request, please note reasons on the report and return to me. I have included an international reply coupon to prepay your postage.

Verifications should show the station call, location, operating frequency, date and time of reception. This reporter's name should be included, as should the name and position of the issuer.

Thank you for your attention and consideration.

TIME

<table>
<thead>
<tr>
<th>PROGRAM / TRANSMISSION</th>
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<table>
<thead>
<tr>
<th>REPORT RECEIPTION</th>
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<table>
<thead>
<tr>
<th>Signal Strength</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interference (from other stations)</td>
</tr>
<tr>
<td>Atmospheric Noise (static)</td>
</tr>
<tr>
<td>Propagation Disturbance (fading)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Overall Merit</th>
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</table>

<table>
<thead>
<tr>
<th>SINPO Numeric Grades</th>
<th>S</th>
<th>I</th>
<th>N</th>
<th>P</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have interpreted the SINPO Code as follows</td>
<td></td>
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<table>
<thead>
<tr>
<th>Monitoring Start</th>
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<tbody>
<tr>
<td>Additional Time</td>
</tr>
<tr>
<td>Additional Time</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Monitoring End</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receiver is a</td>
</tr>
<tr>
<td>antenna is a</td>
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<table>
<thead>
<tr>
<th>THE FOUR COMPARTMENTS OF LOCATING HF TRANSMITTERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>(by an experienced transmitter hunter)</td>
</tr>
</tbody>
</table>

| THOU SHALT NOT use loop antennas for HF direction finding at more than a few miles. (Even 40 years ago it was known that loops were useless if skywave was more than 1% of the signal!) |
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| THOU SHALT NOT use loop antennas for HF direction finding at more than a few miles. (Even 40 years ago it was known that loops were useless if skywave was more than 1% of the signal!) |

One caution: You cannot mix kilohertz and megahertz since the sort does not recognize the difference in the numerical values. Thanks, Bob, for this great programming routine!

THOU SHALT observe signal strength moving towards and away from the proposed location from several directions (and compare the results to the remarks following the second commandment).

THOU SHALT use one's eyes. (Although seeing an HF antenna is not evidence alone, it will certainly help.)
**MONITORING POST**

Henry Fonder of Lawndale, NC, enjoys listening to the spectrum from this cozy corner of his home. A partial list of his monitoring equipment includes a Bearcat 220 with a Grove Scanverter, an FRG-7700 shortwave receiver, an old Hallicrafters receiver, a Motorola remote unit for the sheriff and two CB rigs.

Compact Ham Shack of Arnold Feldman WA3DAO:
- Son Cymnet receiver
- Heath SW-1 bridge
- SST tuner

Bears 110 2 300 ThinScan
- Kenwood R-2000
- Infotech M600A
- Regency Flight Scan
- Radio Shack PRO-30
- Commodore 64, 1541 disk drive, 1526 printer
- Dishcone antenna for scanning
- McKay-Dynex DA-100 active antenna for SW
(Dave, Cleveland, OH)

**TECHNICAL TOPICS by Bob Grove**

**Q** What is the address of Sharp Electronics? Whatever happened to Lafayette Radio and Electronics? (M. L. Flanagan, Charlotteville, VA)

**A** Sharp Electronics' address is 10 Sharp Plaza, Paramus, NJ 07652. Lafayette Radio and Electronics went through a painful period of reorganization about four years ago, closing all of their nationwide outlets as well as their mail order division. One or two home stores remained near Syossett, Long Island. I don't know if they are still open.

**Q** Why does my RTTY copy switch from figures to letters while I am receiving weather (WB2)? (Bill Griffith, Groves, TX)

**A** You probably have your "unshift on space" (UOS) feature engaged. This is a useful function for normal text, preventing erratic bits from forcing the decoder to shift to numbers and symbols which become "garbage" on the screen. Simply disengage the UOS function and the problem should clear up. Use UOS once again when copying plain text.

**Q** Can you send me the address of the "Ten-Ten" club? (Nathan Rosen, N. Brunswick, NJ)

**A** The Ten-Ten Club, comprised of active ten-meter amateur operators who encourage use of that band during low propagation conditions, has a regional manager for each call district.

Membership ($4 per year) entitles participants to receive the newsletter, "Ten-Ten International News." For more information send an SASE to Jim Michaels W6FGM, 3102 Lomina Avenue, Long Beach, CA 90804.

**Q** Why do tabs advance by 8 characters on my computer? (J. A. Murphy, NC)

**A** It is typical of computers to have a tab width of 8 characters.

**Q** What antenna would be required to hear the military FLEETSATCOM satellites? Would it have to be pointed at an angle? (Ray Tongue, Las Vegas, NV)

**A** These military satellites transmit back to earth in the 240-270 MHz range predominantly, and at decent power for detection by any antenna made for that frequency range.

While scanner-type devices will work, the Grove OMNI and Scanner Beam were developed with that range in mind. They don't have to be tilted up in most cases (unless the bird is nearly overhead), although the directional Scanner Beam must face the appropriate direction.

A preamplifier is not required but is recommended.

---

**EXPERIMENTER'S WORKSHOP**

**Earphone Balance Control**

By A. W. Edwards

I developed this circuit to address a couple of pesky problems. One, it seems that all the high quality, comfortable, stylish headphones available are supplied with a stereo plug. Most of the audio I am interested in hearing are monaural. Two, my ears do not hear quite the same anymore.

Due to a bit of horseplay at a shipyard where one dimwitted wished to startle some of us and blasted about 130 dB or portable boat horn in a confined space, my left ear was damaged and needs more input to hear at the same level as the right ear.
The Problem of Unwanted Stations
(Adapted from the SWL Digest of Radio Canada International)

Something which confuses many SWLs and DXers is the reception of short-wave stations on the AM Standard Band of a receiver, and the reception of AM Standard Band stations on one or more short-wave bands of a receiver. In most instances this sort of strange reception occurs on receivers in the lower price ranges, especially when using external antennas.

The strength of this interference varies from receiver to receiver and depends upon the strength of the unwanted signal. The cause of the problem is the same in both cases - a lack of selectivity in the receiver. Selectivity is the ability of a receiver to reject all signals except those to which the receiver is tuned.

The poor selectivity of low-priced receivers is designed to simplify receiver circuitry in order to keep manufacturing costs down.

SOLVING THE PROBLEM

In the case of reception of Standard Band stations on the SW band of a receiver, the least expensive solution is to construct a rejection filter tuned to block out any standard-band station interfering with SW reception.

In both the parallel and series tuned rejection filters (Figs. 1 & 2) the input and output connections of a standard AM receiver are shown, together with the SW station, often a DX. This means that when the filter is connected between the antenna and receiver input (the receiver's antenna terminal), all signals below 2 MHz (which includes all of the standard AM broadcast band) will pass through the filter. Any frequency above 2 MHz, which includes all of the international SW broadcast bands, will be blocked by the filter.

Reception of an SW station on the AM band of a receiver is usually due to a very strong signal from an SW station, often the result of unusually good propagation conditions.

Any questions regarding this information should be directed to: Radio Canada International, The DX Digest, P. O. Box 6000, Montreal, Canada, H3C 3A8.

LOW PASS FILTER - FIG. 3

PARTS LIST
*L1 & L2 - 3.6 microhenry RF Choke
C1 & C3 - .0045 mfd. capacitor (15 wdc)
C2 - .006 mfd. capacitor (15 wdc)
R1 - 50 ohm, 1/2 watt Resistor
*R2 - 22 turns of #18 or #20 AWG enamelled copper wire, on a 5/8" PVC or polypropylene former; windings should be 1 wire diam. apart.

This filter can be mounted on a small board, and housed in a metal mini-box. The input and output impedances of this filter are 50 ohms, and it will work reasonably well with antenna and receiver input impedances of 50 to 75 ohms.

NOTE: You may find it difficult to find chokes of the value listed above for L1 and L2. Since these values are not extremely critical, you can use the closest available standard value provided that it is not higher than the value listed above, or you can make your own using the above instructions. Using a value lower than 3.6 microhenries will simply make the cutoff frequency of the filter slightly higher. Using a value higher than 3.6 will lower the cutoff frequency, and may possibly put the cutoff frequency somewhere in the middle of the AM broadcast band; which would defeat the purpose of the filter.
**STOCK EXCHANGE**

**PERSONAL**

NOTE: Monitoring Times assumes no responsibility for misrepresented merchandise.

SUBSCRIBER RATES: $.10 per word, paid in advance. All merchandise must be non-commercial and radio-related. Ads for Stock Exchange must be received 45 days prior to the publication date.

**COMMERCIAL**

$25 payment must accompany ad. Send 2 1/4" wide x 2" long camera-ready copy or we will type copy (35 words maximum).

**NASHVILLE-AREA SCANNER GUIDE !!!

Hundreds of Public Safety Business, Utility and Oryland frequencies.**

$2.50 PPD.

**ROCKY MOUNTAIN SHORTWAVE SPECIALISTS**

Kenwood, Yaesu, Sony, Icom, Panasonic, Uniden, NFI, M/W, Regency, Bearcat, GE, HAM, Antennas, Books, Accessories

**ALLIED APPLIANCE & RADIO**

4253 South Broadway Englewood, Colorado 80110 (303)761-7303

**CLANDESTINE CONFIDENTIAL NEWSLETTER**

keeps you up-to-date on the mysterious world of political and military covert communication broadcasting. 6 issues, $10, $13 overseas, US funds only. Sample issue $.2.

G.L. Dexter, RR4, Box 110, Lake Geneva, WI 53147.

**KENTRONICS**

P.O. Box 286
Vernon, Alabama 35592

**ROCKY MOUNTAIN SHORTWAVE SPECIALISTS**

Kenwood, Yaesu, Sony, Icom, Panasonic, Uniden, NFI, M/W, Regency, Bearcat, GE, HAM, Antennas, Books, Accessories

**ALLIED APPLIANCE & RADIO**

4253 South Broadway Englewood, Colorado 80110 (303)761-7303

**SCAN-LOC**

FOR THE TS-405S

HALT IN ACTIVITY FREQUENCY OPERATES WITH OR WITHOUT ADJUSTABLE REMOTE DECOY

COMPLETELY INTERNAL NO HOLES OR MODS 5-WIRE INSTALLATION TRANSPARENT TO NORMAL OPERATION ACTIVATED BY LOCK SWITCH TELLS POINT SET BY ORIGN. $19.95

**INFORMATION PLEASE**

Monitoring Times will print at no charge (as space permits) announcements and questions of a non-commercial service nature.

WANTED: Service Information - dial stringing guide for HALLICRAFTER CR-44 or CR-50. Willing to pay for same. Dick Outow, Box 406, Clinton, MI 49236

Has anyone got the owners manual and/or service manual for the REALISTIC DX-160? I would like informations on connecting it to a KENNEDO TS530S as an outboard receiver. Please send to Tom Waile, W8WX, Rt. 7 Box 307, Salisbury, NC 28144.

Will pay reasonable amount for original and complete manual of any German military communication equipment data sheets supposed to be spy radio, please. Or will appreciate information on published article on the matter. Luis E. Suarez, Apartado 66994, Caracas 1061-A, Venezuela.

I would like to correspond with anyone who is a utilities DXer. Also an interested in DX'ing English language SW programs or anyone who knows about propagation. Dave Legg, 9217 Cottage Grove Avenue, Highland, Indiana 46214.

WANTED: Two books. SUN EARTH and RADIO; INTRODUCTION TO THE IONOSPHERE, Both by J.A. Ratcliffe. Jim Morgan, 1563 Ohio St., Lot 56, Bangor, ME 04401.

Need manual and(or) plans on how to build Knight Kit Star Roamer receiver. Mike Plummer, 26537 W. 6 East, Nappanee, Indiana 46550, (219) 773-2791.

1/4 cent per reader is all an ad this size costs.

Think It Over

**GROVE ENTERPRISES**

P.O. Box 98
Braintree, NC 28902

**RUSH! NEWS VALUE**

**BULK RATE POSTAGE PAID**

Grove Enterprises

PERMIT No. 4

Braintree, NC 28902

**MECCA MCR-8600 car stereo, AM/FM/MPX cassette player with two speakers; New in box with manual. $99 includes shipping UPS.**

**BULK RATE POSTAGE PAID**

Grove Enterprises

PERMIT No. 4

Braintree, NC 28902

**GOODMAN, DAVID J. **

1/7/85

**FURLONG, MARVIN**

31807 HARMAN TRAIL

**CHARRIER FALLS**

OH 44022

SEE MAILING LABEL FOR SUB. EXPIRATION MONTH/DAY/YEAR