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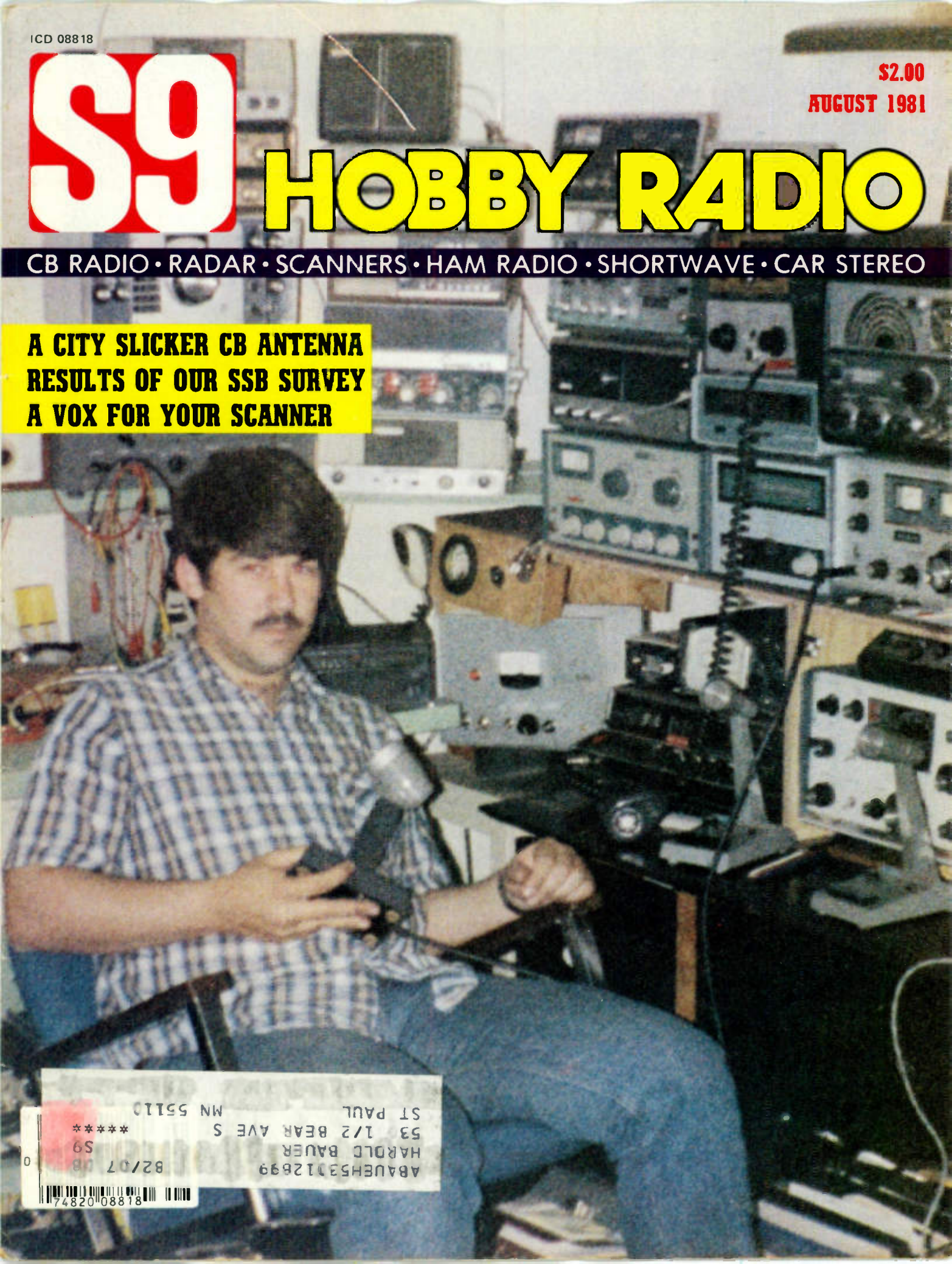

the 1981 formula-1™

the antenna specialists co. presents the latest advance in high-performance antennas for professional CB communications ...and major support for REACT✲

A formula race car and A/S's new Model M-710 ***Formula-1*** are more alike than you'd guess. The engineering strategy is identical: continually refine a proven basic design, within a set of strict operating parameters such as electromagnetic propagation and transmitter power, with one objective: MAXIMUM POSSIBLE PERFORMANCE.

That's ***Formula-1,*** the direct descendant of A/S's original classic base-loaded low-band mobile police antennas, and the culmination of over 25 years of continuous design development. Born for performance, built to last. ***Formula-1*** is today's new state-of-the-art in mobile CB antennas.

- Precision-wound, water-proof "Big Momma" type coil. Cool running —x100 reserve power factor. Lifetime burnout guarantee.
- Factory tuned for general use; set-screw ultra-fine tuning.
- Longer whip for more "reach."
- 17-7 PH stainless steel whip. Taper-ground to minimize range-robbing wind deflection at highway speeds.
- Anti-static whip ball-tip for less noise, better safety.
- New quarter-turn quick-disconnect. Life tested over 2,500 times.
- 17' pre-assembled cable, miniature in-line connector for easy installation.
- Contour-forming protective mounting gasket for finished appearance.
- Complete hardware for both roof-top or trunk-lip mounting.
- 5-year limited warranty.

Formula-1 performs like a formula should...and overtakes anything else on the roads. Available now from your CB dealer.

the antenna specialists co.

✲ ***Formula-1*** contributes a whole lot more than just performance. A/S is so convinced of the need for CB as serious highway communications we're donating $1.00 to REACT International for every ***Formula-1*** purchased in 1981. Join REACT. Get involved. Ask your dealer for details.

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AMERICA'S OLDEST AND LARGEST CB MAGAZINE

VOLUME 21 NUMBER 8 AUGUST 1981

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CB NEWSWIRE

YOUR CB NEWSPAPER AUGUST 1981

CB ANTENNA CONTRIBUTES MORE THAN PERFORMANCE

When the Antenna Specialists Co. revealed several months ago its massive support program for REACT, the company hinted that a major element in that program, one which would result in a significant cash contribution to REACT, would be a "new, high performance mobile CB antenna."

A/S has now provided the details and they are exciting, not only the direct benefit to REACT (which will receive $1.00 for every one purchased in 1981) but for performance minded, serious users of CB mobile equipment.

Most electronics enthusiasts are aware that natural as well as man made laws establish rather narrow parameters within which a communications antenna may be designed in any given frequency range. Transmitter power, wavelength and the vehicle configuration are among the major limiting factors.

The Antenna Specialists engineers draw a parallel with the design of a formula race car. The basic performance characteristics and thus the original design were established by laws; then, year after year, the design is improved by many electrical and mechanical refinements.

It was this approach that led to development of the new A/S model M-710 mobile CB antenna—and its name, *Formula-1*.

Formula-1 is the result of more than a quarter century of improvements upon the base loaded CB antenna design that has been the standard of the industry since it was first introduced in 1958—a design with an excellent track record for electrical performance, stability and mechanical integrity. Its lineage actually pre-dates CB, with its origin in the professional and public safety low band era of the mid-50's. The first generation was Antenna Specialists' model MR125, an exact duplicate (except for whip length) of the company's professional class police low band antennas. The success of MR125 duplicated that of its professional brothers; over 10 million MR125's have been purchased, and it still is one of the most popular antennas available.

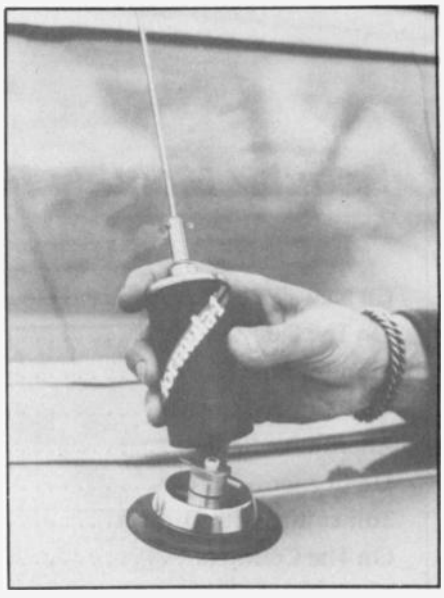
Despite the soundness of the original "formula" design of the MR125, 27 significant technological advances and engineering improvements have been introduced by A/S through the years to further increase performance, convenience, and reliability.

In 1975, Antenna Specialists introduced a second generation design, the *Big Momma* series, incorporating the same professional quality construction but providing a massive, heavy duty coil with a high reserve power factor, permitting the antenna to run exceptionally cool and thus improve radiation characteristics.

Work on the *Formula-1* design began by retaining the essential, field proven features of its ancestors, while adding nine additional concepts designed to increase convenience, reliability and installability (considering today's vehicle configurations).

Formula-1 is a base loaded mobile antenna with the new long whip configuration for extended range, and dual mounting hardware for both trunk lip and roof top installation. The massive, water proof coil is Antenna Specialists' "Big Momma" type, precision wound of 12 gauge copper with silver plated contacts. The jacket is high impact PVC in an attractive, jet black color. The coil has a reserve power factor of x 100, and A/S guarantees it for life against burnout.

The trunk lip mount is A/S Quick Grip (TM) chrome plated stainless steel. It requires no holes and may be installed in a few minutes with the Allen wrench provided. Roof mounting hardware and complete instructions are included.



The pre-assembled cable is 17 feet long, with a standard PL 259 radio connector installed. In addition, the cable has a miniature in-line connector which simplifies routing of the cable.

One of the design features that Antenna Specialists Co. has maintained through the years is its taper-ground whip configuration, continuation in the new *Formula-1*. According to A/S taper grinding, coupled with 17-7 PH stainless steel material, materially reduces wind deflection at highway speeds compared with untapered whips, and is more resilient. Theoretically a one inch thick rod,

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CB NEWSWIRE

standing straight at all times, would provide a better electrical pattern, but obviously would be totally impractical on a vehicle. In short, the taper-ground design actually reduces wind resistance when measured against untapered whips of the same length. It does not "bend with the wind" as radically, therefore maintaining the angle of proportion at the horizon where the signal is needed. (See diagram).

A major design objective was to create a completely new, fast and foolproof method for quick removal of the *Formula-1* for safety and convenience. The result was a simple therefore rugged mechanism requiring only a one quarter turn of the loading coil to completely remove the assembly from its stainless steel base. A polycarbonate cam-coupling rampart device provides exceptional mechanical stability and long life for the quick release mechanism. The package includes a neat plastic cap for the exposed contact for environmental protection when the coil and whip are removed.

A/S says that, because of the long history of reliability and field proven performance behind *Formula-1*, they are offering a 5-year limited warranty on the new product.

A basic objective in the design of *Formula-1* was to provide the best possible performance and reliability for the serious highway communicator. So strongly does Antenna Specialists believe in the importance of CB radio to highway safety, and the need for utmost reliability of CB systems, that it has recently launched a major support program for REACT International Inc.

The high level of engineering achievement represented by *Formula-1*, plus the financial support to highway safety represented by the A/S REACT program, should ensure continued long life for the industry "formula" for mobile CB antennas.

To help REACT grow, and provide even greater service to the public, A/S has dedicated a significant financial contribution to REACT based on purchases of *Formula-1* antennas. *For every Formula-1 purchased during the entire year 1981, A/S will contribute $1.00 to REACT International, while encouraging its dealers to contribute additional funds and other local support to individual REACT teams.*

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A CITY SLICKER

Being an apartment-bound CB radio enthusiast is probably one of the most frustrating experiences in the radio hobby. Let's face it, unless you're willing to confine your hobby to your mobile, when you live in an apartment there's probably no way your signal can compete with those from people who own homes.

It always seems that there is some rule or regulation in the lease that prevents you from putting up a decent antenna. And as all radio hobbyists know, the antenna is the key part of any decent radio system.

I'll admit there are some pretty good, compromise hidden antennas on the market. They do a good job getting a signal out. But that output just doesn't match the big guns with their outdoor antennas. It's a fact of life in an apartment.

No matter how you twist and squirm, invent and tinker, the signal can't be as good when you're transmitting from inside an apartment.

The simple fact of the matter is that most modern apartment buildings are likely to be metal-framed buildings. Now that frame may be great for structural rigidity and other things—I'm no engineer—but it sure as heck will eat up your signal. It will also play havoc with your SWR match.

It all has to do with attenuation. The metal frame of the building is a great siganl attenuator. Let's look at an example of what I mean.

Most radio manufacturers have what are called radio rooms. No, these aren't radio shacks, but are radio test rooms. They are likely to be covered with a layer of copper and their purpose is to allow the manufacturers to test radios in an RF clean environment.

The metal shielding keeps the signals the manufacturers don't want out of the test area and keeps the signals they do want inside. Thus, the incoming and outgoing signals are attenuated.

The same thing happens in a metal-framed apartment building, but to a much lesser degree. Because the building isn't perfectly shielded—the framing only acts as a partial shield—it isn't a perfect radio bottle, so some of the signal gets out. However, a great deal of it still seeks out the metal frame and heads to ground.

Modern apartment construction techniques, too, have something to do with it. The frame aside, the cinder block and brick construction techniques also act to shield radio signals.

And, don't forget the landlord. Even the most understanding of landlords in a large apartment complex is unlikely to let you put an antenna on the roof.

If you live in a wood-framed apartment house—duplex, etc.—then you

CB ANTENNA

By Marc Stern, KBFS-8072/SSB0A71

have an advantage. The wood construction doesn't mean much to a radio signal. So, it's likely that in this situation—if you have access to an attic—you can put up some sort of antenna that will work with a good degree of efficiency. (In this case, just remember to stay clear of electrical lines because, sure as shooting, those lines will pick up some of your signal and you'll end up with interference running through your house, and maybe your neighbor's, too.)

Even if you're lucky enough to live in a wood-framed building, then chances are you still won't be allowed to get an antenna up on the roof. So, you're stuck with that compromise antenna that's in the attic.

However, Barker and Williamson, for one, comes to the rescue of the apartment-bound radio operator with its model 370-10 portable whip antenna. No, it's not as big as a full-sized roof antenna and its signal capture area isn't as big, either. But that's not my point. This antenna actually allows you to put some sort of radiator outside your apartment. And, whenever you can get a radiator outside the apartment, you're a big step ahead.

B&W, long known for its line of switches, radio accessories and antennas, has come up with a winner in this antenna. Basically, the antenna works well. Of course, as I noted, it won't work as well as a full-sized roof-mounted antenna, but it still works. To put this into numbers, when I conducted an on-the-air test between the antenna systems I was using—a converted mobile ground plane antenna poking through a window versus the B&W portable—signal strength increased on the order of 10 to 12 dB. That's right, the increase was that great and my S meter confirmed the difference more than once (it also drew some interesting comments from other operators).

This antenna is a rather unassuming affair. In fact, if you asked me to describe it, I'd have to say that it looked like an auto radio antenna attached to a funny-looking bracket.

This antenna comes as a complete kit and actually works on several different frequency bands. But, the one we're concerned with is the CB band. The package includes the whole antenna. The radiator looks like a telescoping auto radio antenna, which it may just be. But, this is one of the beauties of this antenna. Because the radiator is adjustable, you can play around with the length for best performance and match. (B&W says it should be fully extended, but I'd say that you still may have to adjust it a bit for lowest SWR. This depends, of course, on the kind of building you're living in.)

When you first open the kit, what

you'll find are several small boxes containing coils, a Plexiglas base piece, two small brass screws, a large brass screw, a length of precut coax with a couple of lug fittings (you'll have to install the correct coax plug for your rig on the other end, or have one installed, it's easy to do), a large, aluminum window bracket, a counterpoise wire and the radiator.

Actual assembly time—excluding the installation of the proper coax fitting for your rig—should take about five minutes. All you have to do is first take the ground lug of the coax and attach it to the base of the antenna with the large screw. This screw is also the base screw for the Plexiglas base. To install it, merely insert the screw through the ground lug and then through the large hole in the bracket. Then, take the Plexiglas base piece and hand-tighten it to the large screw.

The next step is to attach the proper coil—in the box labeled "CB"—and the "hot" center wire of the coax to the base of the antenna. This is easy because this piece of wire has a white piece of insulation, just below the screw eye through which you insert the shorter of the two screws. This piece is then attached to the eye on the base of the coil. All it takes is a gentle twist of the screwdriver. *DON'T, DON'T, DON'T* use a gorilla grip to tighten this little screw, it just doesn't need it. Remember that brass is a soft metal and you can easily break the screw by overtightening it. The next step is even easier. All you have to do is take the longer of the two small screws and push it through the top eye on the coil and then through the top hole on the Plexiglas base. Again, you have to tighten it down with light pressure.

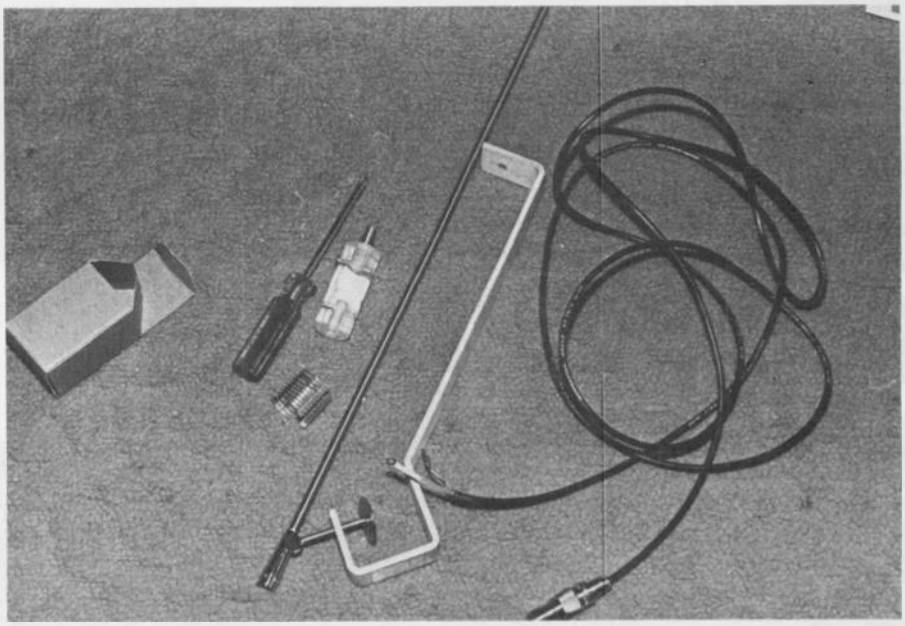
The next step in assembly is easy, too. On top of the Plexiglas base, you'll notice a short, large, brass shaft. It is over this piece that you fit the radiator. Once you have done this, all it takes is securing the two set screws in the radiator's base.

Believe it or not, that's all there is to making up this antenna. What you should now have is the completed antenna, ready for mounting. But, what's this long coil of wire and the copper clip doing here?

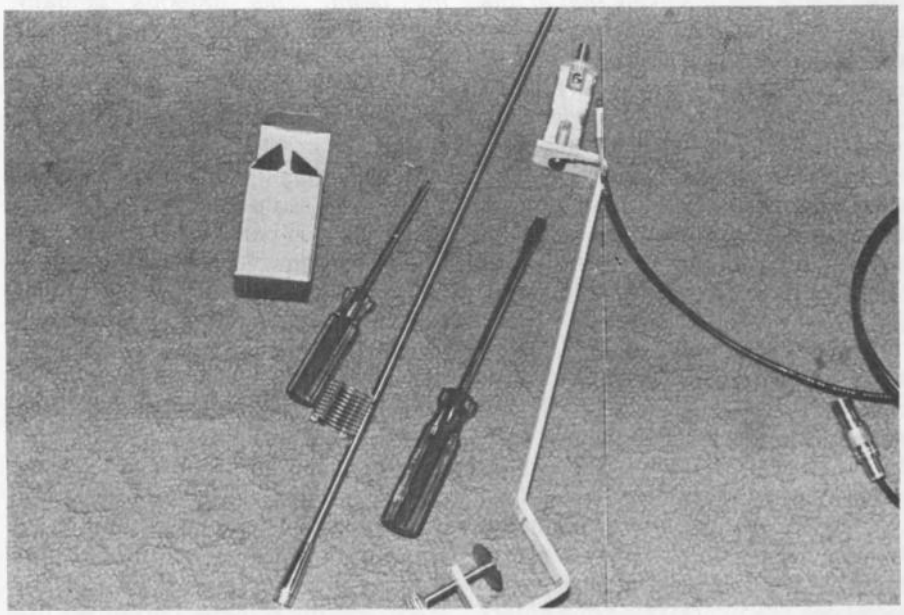
This is the last part of the antenna kit and it's called a counterpoise. This is really an oldtime radio trick. The problem with using any type of vertical antenna is that it needs some sort of ground system to work correctly. We've all seen the 5/8-wave vertical antennas on the roofs of houses, with those four radials. Those radials provide the reference ground for the antenna and they are usually ¼-wavelength long.

Those radials, you see, are very necessary to the proper operation of the antenna. However, with some types of vertical antennas, it's impossible to have a proper ground-radial system. So, oldtimers in the radio hobby used to use what they called counterpoise. Essentially this meant connecting all parts of their transmitting station to a common ground and then running pieces of wire about ¼-wavelength long along the floor. This provided a good substitute ground system and helped their radios perform reasonably well (you still can't beat a good ground system).

B&W has also included a counter-



This is what the B&W portable antenna looks like when you first spread it out. Note all the parts are included including the proper coil, the coax, the window bracket and the radiator.



The first step in putting this antenna together is attaching the Plexiglas base and ground lug to the window bracket. This is what it looks like when you're done.

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poise in this antenna kit. All you do is attach the copper spring clip to the counterpoise wire—which is marked as to how far you have to unwind it for a good counterpoise—and then attach the wire to the base.

You only have to unravel about five or six feet of wire to obtain a good match. B&W has also had the foresight to include little tags telling you how far you have to unravel the wire. You then take a twist tie or something and make sure that the wire stays in a loop. Make sure the wire runs away from the base at about a 90-degree angle for best results and try to run it as close to the floor of your shack as possible.

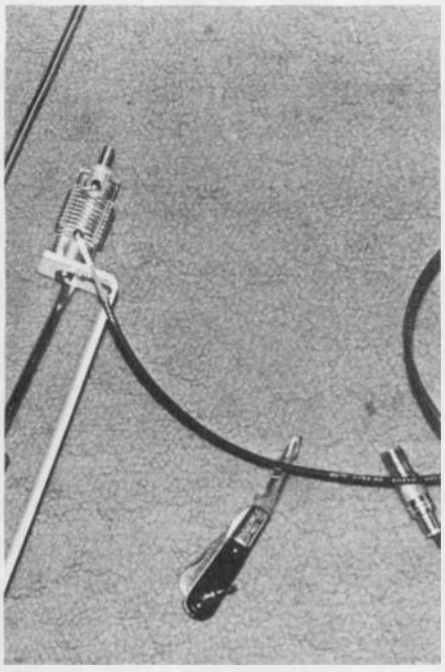
Now all that's left is connecting the coax to your rig and firing it up for the SWR check. You should be able to obtain a reasonably good match right from the start. However, if you don't you may find you have to play around with the counterpoise length for the best match. If that still doesn't work, then adjust the length of the radiator and you should be able to achieve a very low SWR (I have it as low as 1:1 or 1:1.3 across the band).

If your apartment has metal-framed windows then you're going to have to take some special precautions. That window frame can upset the SWR quite easily. To cure this, simply take two pieces of cardboard and place it in front of the base part of the window bracket (which has a wingnut and adjustable screw so it will adapt to any sized window) and take two more pieces of cardboard and place it in front of the screw. This will effectively insulate the bracket from the grounding out effects of the window frame. Once you've done this, raise the window a couple of inches to further isolate the bracket from the frame. If you've been having problems with SWR, then this should effectively cure the problem.

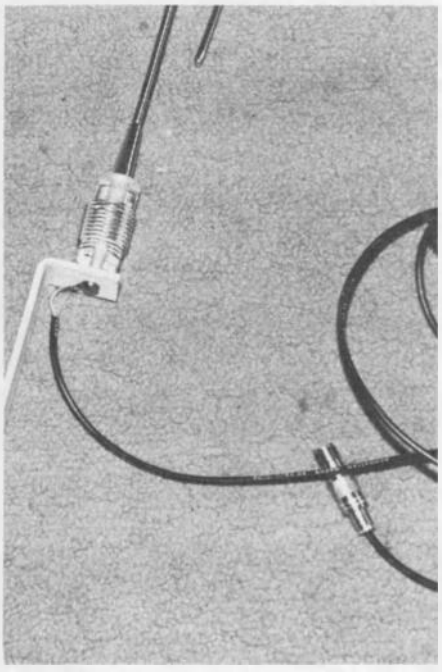
The B&W antenna is one of the ideal solutions for the apartment-bound CB operator. Even if it isn't as good as the "big boy" antenna on the block—in size, not performance—because of the difference in capture space, this antenna is very, very effective. Most importantly, it puts your radiator outside your apartment, something which will make all the difference in the world in enabling you to get your signal out.

For its mini-size, this antenna is quite a good performer, and is something the apartment-bound operator should think about. (In reality, this antenna is quite good for vacationing operators, too. Once you've got it put together, you can collapse it and it will easily store in your mobile. Once you're at your vacation site, it should only take a minute or two to put up and you're on the air again. Also, if you are into public service and emergency work, then this antenna will also work well at any temporary operating site at which you may be. It is quite a package in a small size.)

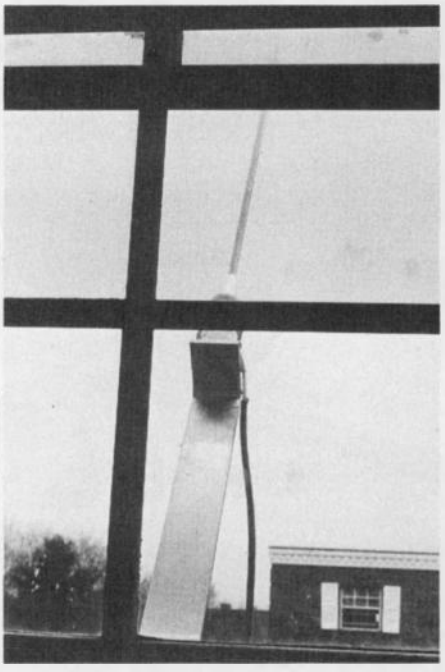
So, if you're a city slicker—don't think that you can get those signals in or out of your "20," there are companies who have devoted time to helping you out. B&W is one of them. Also check out antennas which can be used indoors which are offered by Hustler, Turner/Hy-Gain, Shakespeare, Firestik, Avanti, Anixter-Mark, Valor, Radio Shack, Gold Line, Francis Industries and Antenna Specialists. I've even seen excellent results with an American Antenna K-40 mobile whip hooked to a terrace railing—when the antenna isn't in use it simply and quickly disconnects to be hidden away from the landlord's prying eyes!



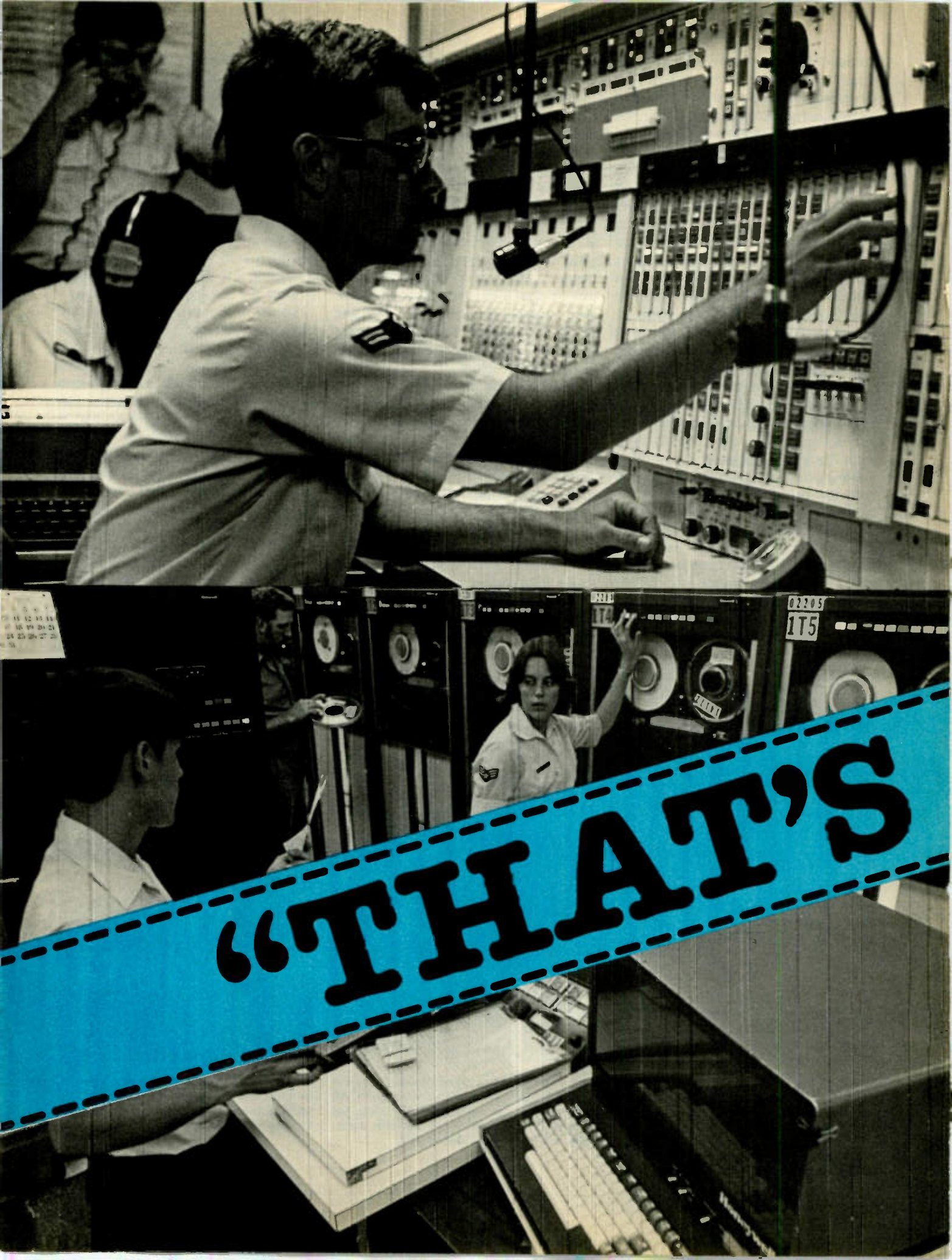
The next step is attaching the coil to the base. (I think this should be done with the radiator unattached. It makes things much easier.) Notice the "hot" center wire of the coax is attached to the base of the coil and the top part of the coil is secured with a long screw.



Once the coil is in place, the next step is attaching the radiator to the antenna. All this requires is tightening the two set screws in the base of the radiator stick. This is what it should look like.



When it's finally on the window frame, this is what the Barker and Williamson portable antenna looks like. For its pint-size, it does a very good job.


"THAT'S

INSIDE THE AIR FORCE COMMUNICATIONS COMMAND

A ROGER!"

By Major Carl F. Freeman, USAF (WA4AQW/9)

Let's build the impossible oranlzation. Start with a goodly portion of the Bell System's operations In the United States, combine It with Western Union's long-haul operations, then add the Federal Aviation Administration's air traffic control activities and, to make things interesting, throw in a major data automation company.

Then give this mish-mash of seemingly unrelated activity a requirement to, in just a matter of hours, move halfway around the world to an isolated location with no physical Improvements and be in operation almost immediately after arrival. By the way, when you move you have to take your own support...housing, food service, power generators, etc., etc. ...with you.

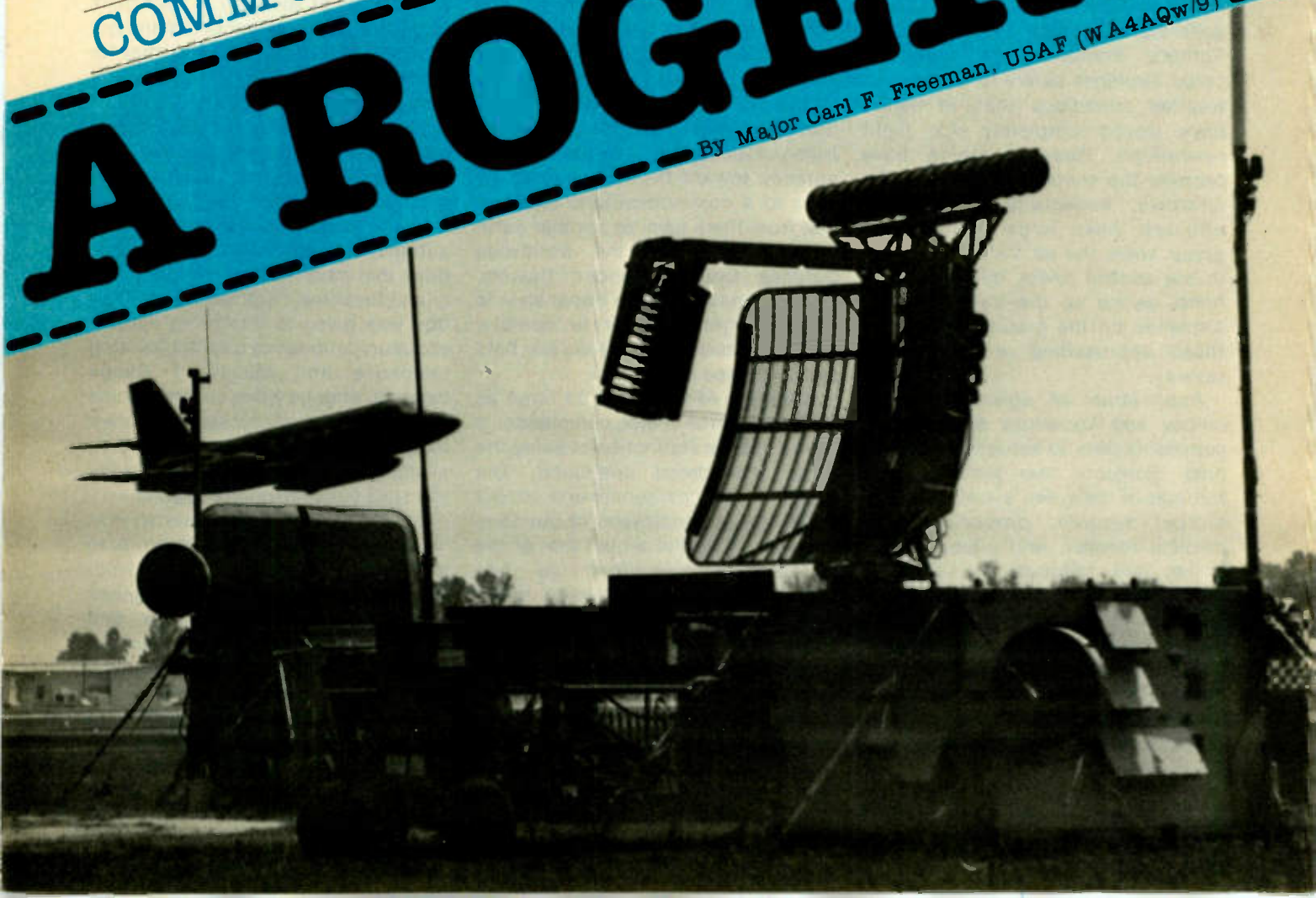
To cap it off, everything has to operate perfectly in a wartime environment as well as in peace.

Anywhere else, this mythical organlzation would be impossible, but it just about fits the Air Force Communications Command, which this year is observing its 20th Anniversary.

Today, AFCC is responsible for three very broad areas of Air Force activity; all forms of base and long-haul communication, air traffic control, and common user data automation. And the hardware used is just about as diverse as the command's mission. Almost every kind of radio, radar, teletype, telephone, switchboard and Interconnecting gear, microwave, satellite, and data transmission system available is employed somewhere in the command to meet a specific need.

AFCC planners are quick to admit that today's equipment and systems won't meet tomorrow's needs, so they're designing and engineering communication and air traffic control systems that will serve the Air Force tomorrow and in the years ahead.

In one way or another, services provlded by AFCC touch every corner of Air Force life. Immediately obvious is the telephone...every Air Force base, every office, and just about every remote or isolated location has a telephone available. Telephones that aren't actually owned and operated by the Air Force are leased from civilian firms and these rented facilities alone are valued at more than $240 million each year.



Members of the 5th Combat Communications Group complete installation of an eight-foot parabolic dish antenna at Eielson Air Force Base, Alaska during Exercise JACK FROST 79. The antenna is part of a wide-band radio system that provides communications services for other Air Force units in the exercise. (U.S. Air Force Photo by Major Carl F. Freeman)

The less obvious communications and air traffic control systems are just as important to the way the Air Force carries out its mission. New solid-state landing systems guide fighters, bombers and mammoth cargo airplanes safely to runways in weather conditions that, in earlier days, would completely stop flight operations. Radar systems have become the second pair of eyes for aircrews, especially in crowded airspace near large metropolitan areas, while the air traffic controller in the control tower, microphone in hand, serves as the traffic cop for airplanes on the ground as well as those approaching or leaving the runway.

Application of space-age technology and know-how has allowed communicators to actually compress time. Subjects that include large volumes of data, like accounting and budget figures, personnel and medical records, and supply inventories, are reduced to computer language and transmitted by telephone or radio in massive bursts of information. At the receiving end, the transmitted data is converted back to its original form or stored in computer memories for later use.

Space is another resource that has been compressed in Air Force communications. Just a few years ago, for a forward unit to be in contact with its headquarters, required a jeep fully loaded with transmitters, receivers, power supplies, and a trailer in the back carrying the generator. Today, AFCC engineers are evaluating a transceiver about the size of a citizens band handi-talkie connected to a hand-held antenna that looks more like the dilapidated frame of an umbrella. By pointing the antenna toward the sky you get access to a communications satellite, and from there back to another earth terminal and into the worldwide Defense Communications System. The hand-held satellite transceiver is smaller, lighter, easier to operate, and much more reliable than any field systems used in the past.

Although AFCC is not as large as other Air Force major commands, it does have the distinction of being the most widespread command. The 42,000 military personnel and almost 7,000 civilian employees in the command are found in all but one of the 50 states (Vermont is not represented) and 23 foreign countries. Team depth is represented by some 16,000 trained and ready Air Force Reserve and Air National Guard communicators. These reserve forces represent the other half of the AFCC Total Force team. These forces are vital to communications readiness. For example, the Air National Guard represents almost three-fourths of the command's combat communications capabilities and half of the engineering and installation resources.

At any given time, more than third of the command's people are stationed overseas. The distance to overseas forces and the unavailability of contract communications services dictates that AFCC provide a greater proportion of military personnel in overseas areas to meet communications needs. This fact also probably makes AFCC people the most experienced travelled people in the Air Force, but it is the engineering and installation team members that really get around. They're the ones responsible for installing and changing communications and air traffic control equipment both overseas and in the United States. Today, there are some 350 electronic installation teams, and at any one time, about 70 percent of these people are away from their home bases installing and improving electronic systems and removing older equipment that is no longer needed.

To really appreciate the present capabilities of AFCC, it is necessary to understand how the command got to where it is today. It seems that for many years, military communicators were playing catch-up ball.

In the early 1900s, military leaders were presented a variety of new and exciting technologies. A lot of emphasis was placed on things like motor vehicles, steam powered ships, automatic weapons, and other inventions that gave military forces mobility and firepower. Not too much attention was given to improving military communications beyond the existing telephone and telegraph. Things began to change when senior officers wanted to communicate with their troops and found that the then available systems just didn't provide the speed and flexibility needed.

In 1934, Colonel (later General) H.H. "Hap" Arnold led a flight of B-10 bombers on a round trip from Washington, DC to Alaska. Distances were long, airfields were few, and communications facilities were in short supply. Arnold's communications officer, Captain Harold M. McClelland (who also later became a general), strung the few existing two-way radio stations together into what might have been considered a network, and provided communications

support for the flight across the Canadian and Alaskan wilderness.

As much as the Alaskan flight proved the value of communications supporting air travel, a subsequent mission showed the dangers of what could happen without communications. Arnold and McClelland got caught in bad weather on a routine cross-country flight and tried to land at Barksdale Field, Louisiana. There was no ground-to-air radio station at Barksdale, but McClelland was finally able to contact the Shreveport Civil Aeronautics Administration radio range station, which relayed their landing messages.

In 1938, the Army Airways Communications Systems (AACS) was created to provide the necessary radio communications and navigational aids considered necessary to support in-flight aircraft. World War II became the proving ground for ACCS, and many of the procedures and practices developed in the early 1940s are still used in the air traffic control business today. By 1946, AACS had been renamed the Airways and Air Communications Service, and a year later it became a part of the Air Force.

Throughout the 1950s, communications technologies greatly expanded and, in 1961, Air Force communications needs dictated an autonomous organization. On July 1, the Air Force Communications Command, then "Service," was established as the single manager of Air Force communications.

In the last 20 years, a multitude of communications-oriented missions were assigned to AFCC, in addition to the basic charter of local and long-haul communications and air traffic control. New missions included provision of specialized communications needs of the Strategic, Tactical, Electronic Security, and Aerospace Defense Commands, maintenance of Air Weather Service meteorological systems and interconnected communications circuits, and the total range of equipment design and installation responsiblities.

By 1978, computers were playing a major role in operation of major communications systems. For example, the switching centers for the Defense Communications System's automatic voice and data networks are in reality nothing more than computers automatically switching and selecting circuits for telephone calls and data transmission circuits. (By the way, some 40 percent of the Defense Communications System is provided by the Air Force). The experience of AFCC in this field caused the command to be the logical choice for the added responsiblity of managing the Air Force's common user automatic data processing systems, especially since communications systems were being controlled by computers and because computers were increasingly communicating with other computers.

So much for the "show and tell." To use a popular phrase, "What's the bottom line for this impossible communications organization, the Air Force Communications Command?" The underlying purpose of all military communications is command and control. Military commanders cannot control their forces without being able to communicate. Battles can't be fought, aircraft can't be sent to targets, and supplies can't be ordered unless reliable, dependable communications are available. Without communications, military units become nothing more than ineffective, unorganized groups incapable of completing the mission.

The importance of communications to the Air Force's ability to carry out the assigned misison...to fly and fight...is best illustrated by the AFCC motto: "Providing The Reins of Command."

Special clothing designed to provide protection in a contained environment is worn by members of the 3rd Combat Communications Group as they erect a truck-mounted satellite communications transceiver. (U.S. Air Force Photo by Staff Sergeant Danny L. Bynum)

ON THE SIDE

S9'S MONTHLY COLUMN FOR SIDEBANDERS
BY BILL SANDERS/SSB-295, KW-5304, KBAH6794

FIXEM-UP: GETTING NATIONAL NUMBERS

Single Sideband operators don't use "handles." Instead we identify by special sideband numbers. Those many readers who write to us asking how they may obtain a set of these numbers are advised that we recommend obtaining a set of permanent national numbers from the SSB Network, which is the largest, most prominent, and oldest Sidebanding organization in the world. There are no dues! We suggest that ALL Sidebanders now avail themselves of the opportunity to become part of the vast network—future sidebanders, new sidebanders, and even experienced old-timers with "this many" local and regional numbers. A self-addressed stamped envelope sent to The SSB Network, P.O. Box 908, Smithtown, N.Y. 11787, will bring you information on how you can become a vital and important part of the national Sidebanding movement, and at last obtain a number which is part of the uniform international Sideband identification system, recognized throughout the world.

Remember the survey we took in the April issue? The replies arrived in due time, it seemed as though they would never end! In total, on the cutoff date (April 30th) we had logged in 3,747 returned survey forms! They were still arriving after the cutoff date, however, but we stopped counting and tabulating then so we don't know the total amount received altogether. My guess is that, even though the survey stated that the cutoff date was to be April 30th, we will probably be receiving these things back in trickle form for another year or two—that's the way these things go here! Guess you might call it enthusiasm!

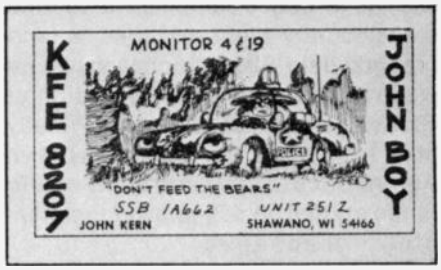
We did observe certain things which were only incidental to the survey, such as at least 40% of the survey forms were either photocopies or re-typed versions of the one in the April issue; guess lots of people declined ripping up the actual issue—we're flattered! About 5% of the forms arrived with accompanying letters which amplified the opinions the readers discussed in the survey. Practically all of those letters also specifically mentioned that the idea of the survey was a good one, that the survey asked all the right questions, and that the *On The Side* column has been worthwhile reading. I couldn't get my hat on for a couple of weeks!

Of course we have no way of knowing if those who sent in survey forms are representative of all of our readers, or how they stack up against the opinions of all of the Sidebanders in North America, so all we claim is that these are the feelings of almost 4,000 Sidebanders. You can draw your own conclusions as to the relevance of their opinions as it might relate to a "national" opinion—although I suspect our sampling represents a far higher percentage than is used for the various systems used to "rate" TV programs by the networks.

Here's what we found; that the average respondent uses CB for 18.7 hours per week, although some folks report that they yak better than 50 hours per week. Our readers who operate Sideband do it *on the side* better than 80% of the time, with less than 20% of their operating efforts devoted to the AM channels.

Our readers report that 70% of their numbers operate mostly from base stations, 10% are predominantly portable operators, while 20% estimate that their operations are split equally between base and portable.

This may surprise and/or annoy or bring great happiness to you. Some 70% of our respondents told us that they look with favor upon *outbanding*—that is to say, operations



below 26.965 MHz and/or above 27.405 MHz. About 20% reported that they were indifferent to it, perhaps not participating in it but not having anything against it. Only 10% said that they were actually against *outbanding*.

Running more than legal power under present regulations? You might have guessed wrong on this one. At least 40% of those who responded said that they were against the practice, 35% looked with favor upon it, while 25% were indifferent on the subject.

As for communicating with *skip* stations, 81% said they looked favorably upon the idea, 16% were dead set against it and only 3% were indifferent. Guess it's one of those things you either love or hate, although most love it.

Only 18% said that they were experiencing *severe* problems with AM operations on frequencies normally used for Sideband communications in their local areas; 47% reported, however, that it was bad but that it was nevertheless not beyond their level of endurance. About 22% reported occasional problems, with 13% saying that there were seldom or never such problems in their areas.

Less than 1% of those responding looked with favor upon the idea of operating without any form of FCC license, but 43% did say that they were indifferent towards the idea. But most folks (56%) reported that they would be against it.

Most of those reporting in (58%) stated that they were licensed in at least one FCC radio service other than CB. This would include Amateur, Business Band, Maritime, Aero-

nautical, mobile phone, radio control, etc.

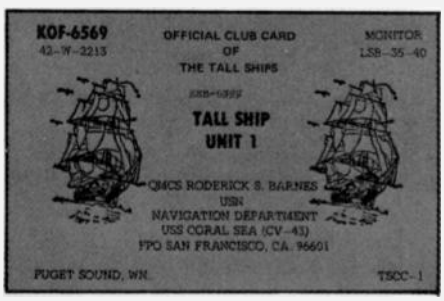
We asked what our readers thought about the CB regulations. A resounding two thirds of those who responded (that's 66%) said that they wanted Part 95 cancelled along with total deregulation of the CB service! After that came 31% who wanted the rules "greatly modified" to permit *skip*, higher power, etc. A miniscule 2% said to let them stand as they are, and 1% wanted the rules tightened up and made more strict.

However, just in case the FCC looked favorably upon the notion of expanding the CB rules for more liberal operation, more than 83% reported that they would be willing to take a special exam to obtain those extra operating rights, with 11% as yet indifferent or undecided. That left 6% who weren't interested—you might suppose that they figure that they're already doing it or else they have no interests along those lines.

Those who responded say they spent an average of $330 on 27 MHz during the coming 6 month period. I should point out here that many survey participants answered the "next 6 months" part of the question with a question mark and we counted that as a "zero" in finding the average amount.
counted that as a "zero" in finding the average amount.

Our survey people have averaged more than 8½ years on 27 MHz, with 3¼ of those years being within the realm of Sidebanding. In any event, 73% of those who responded said they had their own QSL cards, and 87% furnished a SASE for me to send them my QSL.

It will probably come as no shock to learn that more than 77% of our survey people own scanners with 61% owning communications receivers. About 19% own radar detectors, 12% have personal computers, and 74% own stereo systems. About 14% report owning transmitting equipment for non-CB services.

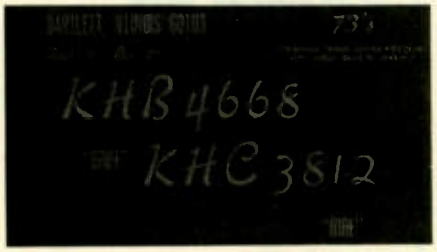


About 19% of our readers said that they read *CB Magazine*, while 17% said they read *Science & Electronics* for their CB information in addition to *S9/Hobby Radio*. Oddly enough, 2% of the respondents listed magazines such as *CB Life, CB Quarterly, CB Digest, 10-4 CB'er,* and other gems which have not been published for several years now! Guess their copies must be getting rather dog-eared after reading those old copies for so long! Roughly 1% of those who responded listed a wide assortment of other assorted publications as sources of their CB information; some of these included *Popular Electronics, Popular Mechanics*, and even, I kid you not, *U.S. News & World Report*! OK, I'll admit that some of these miscellaneous publications received only 1 or 2 votes! Other publications included in this category included several electronics trade publications not distributed to the general public. One guy said that he "reads everything on the newsstand if it even hints at covering CB in its current edition."

In general, most people answered all of the questions we asked. Where questions were skipped over by readers, the total percentages were *not* calculated to reflect those who did not answer specific questions. One interesting sidelight; I gave what I felt were very explicit instructions for where to send the responses, that being to this column in care of *S9* Magazine, 14 Vanderventer Ave., Port Washington, NY 11050. You wouldn't believe where some readers sent their forms! Many were sent to Tom Kneitel, some ended up in the *S9* circulation department after arriving with the magazine's address and no mention of the On The Side column, one was forwarded to me after it had been sent to *Popular Mechanics Magazine*, and at least 2 dozen were sent to other assorted places such as clubs! I think and hope that I was able to collect all of those which were addressed incorrectly and I can't help but wonder why so many used odd addresses. The ones which ended up in *S9*'s circulation department almost didn't make it into our survey as they were mixed in with hundreds of incoming subscription orders—and those which ended up with *Tomcat* were tossed haphazardly into a pile on a chair until he could "get around"

to giving them to me—which was the day *after* the survey ended (I counted them anyway).

And, oh yes, there were a few prizes to be given out to three readers whose names were to be selected at random from the survey forms we received. The first person selected we said would receive his/her choice of any item in the accessory catalog of Gold Line (P.O. Box 115, West Redding, Conn. 06896). The next two names would each receive one of Gold Line's spiffy phone patch units. Remember? So did we!



We reached our banjo pickin' fingers into the carton; rummaged around at some length in order to stir things up a bit, and came up with an open staple stuck into the ol' thumb. The next three ventures into the carton did produce results though. The first name out was George, APRIL 532/3AL490 of Mesa, Arizona. He gets his pick of any CB accessory in the Gold Line catalog.

The following two lucky people get a Gold Line phone patch:

Marty, WEST CENTRAL INDIANA 412 and HOTEL OSCAR 141, of Terre Haute, Indiana.

Skip, POLAR BEAR 635 & 49W181, of Anchorage, Alaska.

These people have had their names given to Marty Miller of Gold Line. Congratulations! I've got one of Gold Line's phone patches and I know the winners will be happy with them.

In our next column we'll present some of the comments which readers sent in along with their survey questionnaires.

LOCATION PREFIX COMMENTS

Rather than continuing to respond individually to each of the numerous letters I have sitting in my incoming mailbox concerning the topic of location identifier prefix numbers, I thought I'd take a stab at it here in the column and maybe that would also save some folks the time and trouble of writing to me in the future about it. Several years ago I gave this same topic a once-over-lightly and I suppose that it's one of those things which requires a booster shot with readers now and again.

What I'm referring to are the numerical prefixes which started in use a while back, and if memory serves me correctly they were originally instituted by state organizations formed under the "Whiskey" club banners. The idea was to pin-down the location of the station by the use of a distinguishing prefix number on the station's Sideband number within the organization. In this manner the general location of the station could be easily determined by any other operator who happened to hear the station.

As the plan was originated, the designator prefixes were assigned to the 50 states according to the order in which they became members of the United States, so the 13 original colonies were numbered from 1 through 13, and Hawaii, the most recent state to become a member of these United States, was designated as number 50. Canadian provinces were allocated the designator prefixes running from 51 through 58, and from 59 upwards were varous other nations of the world. Under the plan, a station which was operating within this system would, if located (for instance) would be immediately recognized as being from Minnesota by virtue of using an identifier along the lines of *32-Whiskey-255* or *32-Whiskey-77*, etc., since Minnesota was the 32nd state admitted to the Union, but mainly because you could get a listing which showed you all of this information just in case you weren't a history buff.

Things went along relatively well for a while, however further developments evolved in due course. Among the assorted later events which bore upon matters was the status of the various *Whiskey* groups themselves. The FCC had given some amount of hassle to some of the state leaders and individual members, the upshot of that

If you're really serious about CB, put your money where your mike is.

Serious CB operators who want to get the most from their transceivers have been setting aside the microphones that came with their radios and replacing them with Turner Microphones. In the United States, they've been doing this since the 1950's. Now they are doing it in 33 countries around the world.

Why?

Radio manufacturers, in order to keep the cost of radios competitive, have designed simple, inexpensive microphones that are just that and nothing more. Turner amplified mobile mikes, on the other hand, with 0 to 15 dB gain controls can supply the extra "talk power" that will fully modulate the radio. Noise cancelling Turner mikes eliminate the unwanted background noise in truck cabs and tractors while delivering clear modulation of the desired signal. Amplified Turner desk mikes with gain controls, push-to-talk switches and lock levers allow the base station operator ease of operation, flexibility and much more "talk power" than the original microphone.

So, if you want to improve your radio's performance quickly, inexpensively and effectively, then get serious and put your money where your mike is — on a Turner Microphone.

Super Sidekick

This is an outstanding base station mike for SINGLE SIDEBAND operations. The Super Sidekick power mike has two gain adjustments to match the sensitive input requirements of both high and low impedance transceivers. If you're a sidebander — you'll be QSA-5 with this mike.

+3B

The rugged die-cast case, temperature-stable silicon transistors and humidity-resistant ceramic element make this power mike practically indestructable. Maximum -23 dB output is easily adjusted by a gain control on the front panel for powerful audio - free of QRM.

RK 56

This is the "truckers' favorite" A combination of economy and exceptional noise cancelling, dynamic performance. In large truck cabs, an extra long rugged coil cord provides easy mike handling and the noise cancelling feature blocks out unwanted background noise for clearer transmissions.

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STATE & INTERNATIONAL LOCATION DESIGNATORS

1 DELAWARE	22 ALABAMA	43 IDAHO	62 PANAMA & CENT AMERICA	81 DENMARK
2 PENNSYLVANIA	23 MAINE	44 WYOMING	63 VENEZUELA	82 FINLAND
3 NEW JERSEY	24 MISSOURI	45 UTAH	64 BRAZIL	83 NETHERLANDS
4 GEORGIA	25 ARKANSAS	46 OKLAHOMA	65 ARGENTINA	84 NORWAY
5 CONNECTICUT	26 MICHIGAN	47 NEW MEXICO	66 CHILE	85 PORTUGAL
6 MASS	27 FLORIDA	48 ARIZONA	67 AUSTRALIA	86 SWITZERLAND & LIECHTENST
7 MARYLAND	28 TEXAS	49 ALASKA	68 GUAM	87 EASTERN EUR.
8 S CAROLINA	29 IOWA	50 HAWAII	69 JAPAN	88 MIDDLE EAST
9 N. HAMPSHIRE	30 WISCONSIN	51 NEW BRUNSW NOVA SCOTIA	70 ENGLAND	89 INDIA
10 VIRGINIA	31 CALIFORNIA	52 QUEBEC	71 GERMANY	90 AFRICA
11 NEW YORK	32 MINNESOTA	53 GREENLAND	72 FRANCE	91 PACIFIC ISLS
12 N CAROLINA	33 OREGON	54 ONTARIO	73 ITALY	92 NEW ZEALAND
13 RHODE ISLAND	34 KANSAS	55 MANITOBA	74 SWEDEN	93 SE ASIA
14 VERMONT	35 W VIRGINIA	56 SASK	75 IRELAND	94 PHILIPPINES
15 KENTUCKY	36 NEVADA	57 ALBERTA	76 SPAIN	95 CHINA
16 TENNESSEE	37 NEBRASKA	58 BR. COLUMBIA	77 ICELAND	96 GREECE
17 OHIO	38 COLORADO	59 MEXICO	78 BERMUDA	97 USSR
18 LOUISIANA	39 N. DAKOTA	60 W. INDIES	79 AUSTRIA	98 MARITIME
19 INDIANA	40 S. DAKOTA	61 PUERTO RICO	80 BELGIUM & LUXEMBOURG	99 OTHER AREAS
20 MISSISSIPPI	41 MONTANA			
21 ILLINOIS	42 WASHINGTON			

was that the *Whiskey* system became somewhat of a patchwork of totally inactive, partly active, and fully active statewide organizations; but it certainly had lost at least a good portion of its steam if observed from a coast-to-coast overview. It was unfortunate that this happened as those who had originally formulated the *Whiskey* groups were well intentioned and sincere—but that's another *long* story. Nevertheless, as I said, some of the momentum had been lost.

Concurrently with these events, other existing and nearly forming Sideband groups found the concept to be something which could be woven into the fabric of their own operations, and thereupon commenced issuing membership numbers which contained numerical location prefix numbers which were formulated along the same lines. One group which would fit into this category would be the group which issues numbers along the style of *9-America-50*, etc. There are others.

Many other clubs, organizations, groups, have had no objections to their members adding these prefix numbers ahead of their own club-issued membership numbers, although the clubs do not actually issue the prefix numbers themselves. So, for example, a club calling itself the *Reno Sideband Club* might identify its members as RSC-38, RSC-122, etc. These individual members might then elect to modify their assigned club numbers to identify themselves as being in the state of Nevada—36-RSC-38, 36-RSC-122, etc. Perhaps the "enhanced" ID's might be used only on occasion, rather than at all times. But this seems to be a rather common practice and I know of no group which has specifically requested its members not to do it if they chose to do so—just for the record, I'm certain that at least 5 groups will now write to me to say that they discourage or forbid it!

However, for those of you who have asked me to list these prefixes—for whatever reason—and explain something about their history and use, here be it! The chart indicates the number prefix designators as I understand them; I do not deny that there may be individuals or groups who have listings which contain minor variations from the one I am providing herewith.

There is, of course, one glaring exception to all of this, and that would be similarly constructed membership numbers in the group known as *Earth International*. This Brazilian-based group with worldwide membership, consisting of both AM and Sideband operators has numbers which are totally different to the numbers which I have just described, and do not match up at all in any instance. For example, Brazil is #1 in the prefix department, while the United States is #2. A station announcing the identifier *2-ECHO-3867* or *2-E-3867* would then be a number located in the United States, and more specifically an *Earth International* number would be issued as 2-E-3867-NY to identify the exact location (in N.Y. state), although not all members use those letters.

I hope that this has brought you up to date concerning these matters and that I have made a significant dent in the number of confused people out there in readerland. And if it causes you happiness to relate to me as 11-SSB-295, or 11-KW-5304—then that's O.K. with me, too. Just remember that the FCC sort of cherishes the hope that, in any case, all club identifiers are used in addition to, rather than instead of, the officially assigned FCC station callsign.

THE MONITOR POST

RICK MASLAU/KNY2GL SCANS THE CHANNELS

MORE VHF AERO BAND CHANNELS ON THE WAY!

Exciting news! They'll be even more exciting things to hear on the VHF aero band if the Federal Aviation Administration gets its way (and they usually do in these matters)! The FAA has put together a sweeping plan which will implement 25 kHz spaced frequencies for certain uses and low-altitude enroute traffic control services. Modern aero-band scanners are designed to operate with 25 kHz spacing, however the actual advantages of those "in-between" frequencies has not been fully realized because until now they have been used only for high altitude operations.

Because of the need to shoe-horn more and more communications into the VHF aero band, the FAA says that they want to gradually phase in the use of the 25 kHz spaced frequencies so that aircraft flying below 18,000 feet can use them as well as those presently authorized to use them about 18,000 feet. Frequencies typical of this 25 kHz spacing are ones with 3 digits after the decimal point, such as 131.175 or 127.565 MHz, as opposed to the "old" 50 kHz separation channel system (such as 129.85, 126.05, etc.) which was as close as they could operate stations until a few years ago. As part of the entire project, although not of any extreme excitement to scanner users, the FAA also proposes to start establishing 50-kHz spaced systems. ILS navigational facilities, which have long been established on frequencies such as 109.3 or 110.6 MHz could start showing up on frequencies such as 109.35 and 110.65 MHz under this plan.

The FAA people say that in many areas the frequencies are saturated and because of the vast number of flight operations below 18,000 feet (which includes a large amount of general aviation—private flying—use) they are going to have to get themselves out of the "box" they are in by opening up the frequencies.

First to be given access to the 25-kHz separated traffic control communications frequencies, under the FAA's proposed master plan, would be ATIS (Automatic Terminal Information Service) stations, certain weather stations, and stations at airports used for ground control and clearance delivery. In about 3 years, as necessary, actual enroute and terminal ATC uses would be put into effect in this manner.

All of this means more to hear and more excitement with a scanner covering the VHF aero band (118 to 136 MHz).

Current station assignment and frequency uses in this band in the United States (48 continuous states), plus border areas of Canada and Mexico, are fully described in the book entitled *Air-Scan*. This is a complete listing of private, commercial and military airports, terminals, and landing sites (including helicopter and seaplane operations) with frequencies used for control towers, ground control, approach/departure, Unicom, Multicom, radar control, ATIS, and other services, as applicable, for the facilities. A complete listing of FAA Flight Service Station and Air Route Traffic Control Center operations is included, as well as the entire nationwide Aero Enroute system used by the airlines for their private communications. Thousands of listings are included, and the book is available for $5.95, postpaid, from CRB Research, Box 56, Commack, N.Y. 11725.

VOX AND YOUR SCANNER

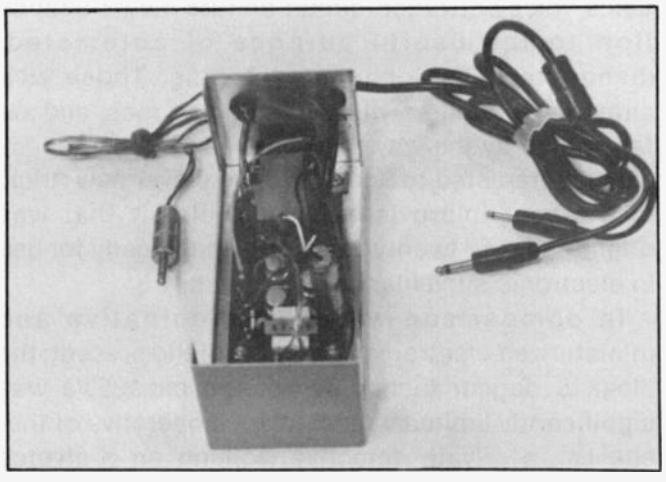
An article appearing in the Feb. '81 issue of *S9*, (*VOX—The Sidebander's "Third Hand,"* by Lou Franklin), offers an excellent description of the versatile voice-activation circuit and its clever adaptation to the useful purpose of automated, (hands-free), microphone switching. Those who already are familiar with VOX microphones, and are fascinated by the way they work just talking to 'em, will be interested to know that the clever new 'trick' is a recent improvisation on a circuit that was originated over twenty years ago specifically for use in electronic surveillance operations.

In comparison with the imaginative and miniaturized electronics gadgetry of the present, the cloak & dagger technology of the pre-1950's was significantly limited. A surveillance operative of that era, i.e., a private detective working on a divorce case, a policeman or federal agent working on a criminal case, or an industrial spy working on the theft of commercially valuable secrets, etc., was required to "sit-on," (physically attend), a monitoring station, which is a concealed 'plant' where record-

ings are made of radio reception from room bugs. This procedure typically involved listening at headphones or speaker for active voice signals from a bugging transmitter, which was 'sending' from a nearby location, then switching on an attached tape recorder each time that intelligible activity appeared. In cases where activity was unpredictable, an audio surveillance might be conducted over a period of days—or weeks, thus the relatively unsophisticated equipment of the Sam Spade generation committed an 'operative' to long, monotonous periods of concentrating on dead silence, waiting intently to do nothing more than switch on a tape recorder during periods of modulated activity. A client of an electronic detective was committed to paying hig hourly rates for the services of a human switch.

In spite of what is usually depicted in the movies, not all monitoring operations were conducted from hotel rooms or exotically equipped mobile vans, (such as the one "Kojak" hangs out in.) 'Plants' often were set up in smelly cellars, mop-closets, rooftops, and truck-bodies, etc. Acquiring a strategically efficient location to comfortably accomodate an array of bulky equipment along with the necessary human switch was extremely difficult, sometimes impossible. This tedious and usually unpleasant aspect of an otherwise interesting and lucrative field became a high priority preoccupation of the eggheads of the bugging business, who wre tantalized by the concept and enticed by the assured profits that a *better way of doing it* would bring.

The first positive step in the direction of voice-controlled switching came in the form of a few experimental 'carrier' devices, most of them cigar-box-size and operating on vacuum tubes and huge batteries. Because of the required detection sensitivity and switching speed, none of these primitive tube contraptions worked very well and they were responsible in many cases for 'blowing' what could have been productive surveillances. But in spite of the discouraging results of these original concepts, the basement wizards continued to tinker relentlessly through years of frustrating failure.



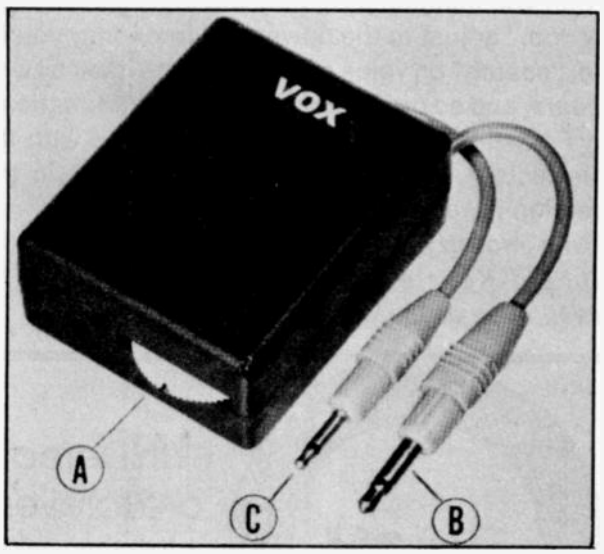
One of the original 'bootleg' VOX devices, this unit was purchased in 1962 for $250.00. It contains about six 1962 dollars worth of parts, assembled on a breadboard and mounted in an aluminum construction box. Thousands of similar devices were sold for as much as five-hundred dollars each.

Shortly after the development of solid-state components came the first practical and reliable method of electronically controlling a tape recorder during a surveillance without the presence of an attending operative. (The SCR played a vital role in perfecting this concept.) Through the application of switching transistors, the first efficient VOX device was introduced to an eagerly receptive market. Because of the somewhat insidious implication in the very purpose for such a gadget, the mass-producers of a then-emerging electronics industry ignored it completely. The emphasis of those times was on building a smaller transistor radio, so the only way to obtain a VOX was to buy one from a 'bootlegger,' or build one. The actual circuit, however, was the carefully guarded secret of a few enterprising technicians, each of whom took the trouble to 'pot' (seal in black epoxy-resin), the components of every completed device to obscure the values from analysis and duplication. The price of a reliable VOX was anywhere from $200.00 to $500.00, and it was paid with a simle by thousands of surveillance operatives in the U.S. and abroad. These prices combined with great and constant demand will suggest to the reader how much money was made by the few availble suppliers of an item that cost roughly five 1961 dollars to build.

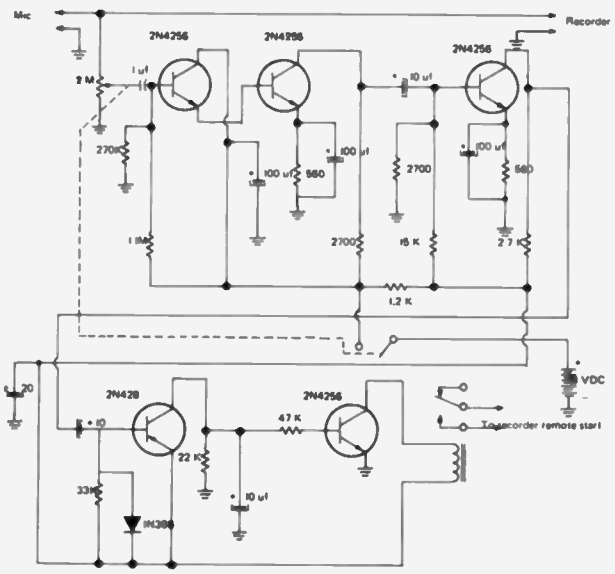
By attaching a VOX to a tape recorder, then patching the recorder to a portable receiver which was tuned to the frequency of an operating bug, an entire monitoring station could be situated inside a small suitcase and stashed almost anywhere in proximity with the bug. The recorder remained in the 'pause' condition until a voice-level sound excited the detector component of the VOX, causing a secondary circuit to close, thus producing a conductive path for the power-to-motor of the recorder. At a point where the activating sound level declined below a recoverable degree, or ceased entirely, the switching circuit of the VOX re-opened causing the recorder to lose power, ('pause'), and so on. This relatively small achievement brought about dramatic changes in the science of electronic eavesdropping. The busy investigator now had time to operate several surveillances simultaneously, by periodically

visiting each of his automatic monitoring stations to recover the expended tapes and replace them if the target information had not been acquired. The influence of this new methodology on the cost of audio surveillance, (formerly prohibitive), caused a boom in the bugging business and a growing number of do-it-yourselfers got into the act. All sorts of applicable devices started showing up in the mail-order columns and in electronics specialty shops all across the county. Everything from pure junk to the most sophisticated devices available were openly sold—including a selection of the acclaimed "VOX-boxes," as they were called. A thriving bugging-device industry was born in the early '60s, but on June 19, 1968, Congress enacted Public Law 90-351, and strangled it in its crib. "Unauthorized" electronic eavesdropping became a serious crime, and mere possession of any device which was *primarily useful* to the purpose of surveillance could bring a prison sentence or a heavy fine. This legislation wiped 90% of the private investigators out of the Yellow Pages, driving many of them underground, and induced a general paranoia throughout the electronics industry. While the language of these laws is somewhat vague in expressing just what constitutes a bugging device, it is sufficiently intimidating to any prospective manufacturer or vendor of anything which *could* be useful to bugging procedures.

While such items as tiny microphone elements, little tape recorders and receivers that can fit into a coat pocket, etc., escaped the purge because of their usefulness in a number of commonplace ways, the VOX device had no visible purpose other than what it was created for, thus it continued to be viewed with lowered eyebrows by officials. Only law-enforcement agencies were authorized to purchase bugging equipment, and a few manufacturers survived the purge by restricting sales to them. They produced the same devices in fancier packages and attached even fancier price tags to them. (After all, the taxpayer pays for them.) As lately as 1978, a leading law-enforcement supplier's price for a tape-recorder VOX was $399.95. The same thing can be purchased today for as little as $34.95!



Modular tape recorder VOX. Works efficiently with any cassette recorder that has a MONITOR provision, (for earphone monitoring.) Mini plug (B) attaches to 'monitor' jack, sub-mini plug (C) attaches to 'remote' jack, thumbwheel (A) adjusts sensitivity. About 100 continuous hours of operation on one 1.5V 'penlite' cell. An extremely well-made device. Available from GARRISON ELECTRONICS, P.O. Box 128, Kew Gardens, N.Y. 11415.



Schematic for a 1960's vintage tape recorder VOX. (Note mechanical relay.) This diagram would have commanded a handsome price when the concept was new.

The notorious VOX circuit remained in commercial exile until, in the early '70s, a simplified, extremely miniaturized VOX device was used to make the eyes of a Hong-Kong import teddy-bear roll when he was spoken to by an incredulous tot. The phenomenal success of this innocent, delightful toy made the eyes of the electronics industry roll, as well. Shortly afterward, there occurred a predictable fallout of VOX-operated novelty products such as light switches and other forms of useful foolishness that gadget freaks cherish, but the first serious and significant commercial application of the VOX circuit was that of making the telephone answering machine, (long a frustration), 'listen' for as long as a caller spoke to it. Next, the U.S. Air Force adopted a VOX-controlled headset mic for its fighter pilots to switch on during tactical maneuvers. Accordingly, the VOX mic of a present-day mobile rig is the *safest* way to operate a radio while driving.

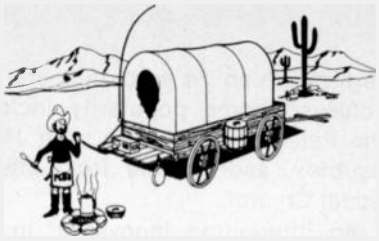
Within the past two years, most police departments and mobilized federal agencies, along with a growing number of mobilized businesses, etc., have adopted the use of VOX-controlled tape recorders to continuously monitor their communications channels. Major scanner manufacturers are now equiping their deluxe models with an "auxiliary" provision, which is a VOX type control for direct attachment to a tape recorder. This is an especially useful feature for monitoring low-activity channels. 24 hours of actual transmissions can be stored, back-to-back, on as little as fifteen minutes worth of tape. For any type of radio equipment, including scanners, which does not include an "auxiliary" provision, an excellent, inexpensive, modular VOX device is available which attaches to any cassette recorder having remote and monitor jacks. We tested one of these devices by hooking it up to an inexpensive cassette recorder and a scanner. The whole thing took about two minutes, and the results were as good as one could expect from the costliest equipment. (For further information and current prices, write to: GARRISON ELECTRONICS, P.O. Box 128, Kew Gardens, N.Y. 11415).

The VOX circuit has emerged from its 'undercover' status to become an increasingly important element of modern radio technology. In another field of electronics, the computer industry recently introduced a typewriter that will type whatever is *said* to it. While still in the experimental stages, its perfection is only a matter of time.

Can you imagine a rig that will start up when you say "on," adjust to the power and frequency you tell it to, "search" on voice command, tune itself by what it *hears*, and so on? By comparing the information in Mr. Franklin's recent article on VOX mics with this little history, it is seen that the first steps in that direction have already been quietly taken...

This month's column was prepared for us by Michael Kessler, a professional electronics surveillance consultant.

THE CB PIONEERS' CORNER



By Judy, SSB-99/PCBS-99

WE LISTENED, TOO!

Very little has been written about the fact that early CB'ers, just as those active in the hobby today, were always big fans of monitoring the public service VHF bands—the main difference being that scanners didn't show up until about 1968. Before that it was a matter of making do with whatever was available, and while some of what was available was good stuff, the rest of it was genuinely odd-ball.

I suppose that you'd have to say that the earliest widespread monitoring of the public safety bands (PSB's) was done by using the high end coverage of the communications receivers which appeared right after World War II. Most of these receivers would tune to 40 or 50 MHz, and one of them (the Hallicrafters SX-42) went right on up from the broadcast band through 100+ MHz. At least a person could get started in monitoring.

At one point in the late 40's or early 50's Regency brought out a pair of tunable receivers, one for the low band and the other for the high band. These were small units housed in plastic cabinets and looked pretty much like the cheap AM table radios of the day. The calibration was so poor that you couldn't guess a frequency within maybe a full MHz, but the sets could pull in the stations and were probably the first public safety band receivers ever to trickle into the hands of hobbyists. These were the original "Monitoradio" receivers, as Regency called them.

Hallicrafters produced the first quality PSB receiver. It was called the Civic Patrol.

Not to be outdone by Regency, shortly thereafter Hallicrafters brought out their "Civic Patrol" tunable series which included low and high band models. These units were housed in smart looking steel cabinets and were far better than the early Regencies in looks, calibration, and general performance.

Eventually there were tunables covering one or both bands brought out by Sonar, Lafayette, and Radio Shack. The old Radio Shack PRO-2, which tuned both bands, still remains as a classic—it was solid state and extremely versatile. I personally never

Still a legend, the Radio Shack PRO-2 dual band tunable PSB receiver.

cared for the various Sonar units which came into the monitoring field (or CB either, for that matter), feeling the sets compared poorly to most others from the design to the manufacturing quality and performance, although Sonar did manage to achieve some degree of popularity despite *my* personal apathy.

The next evolution in equipment to hear the PSB's consisted of various little converters which were primarily intended to be used with mobile AM

Sonar's entry into the field of tunable PSB monitoring.

radio receivers. You used these by unplugging your car's AM radio antenna from the car radio and then plugging the car antenna into the converter, which in turn was plugged

Petersen's MC-1 mobile converter.

into the car radio's antenna socket. With the converter turned off you could hear regular AM broadcasts, but with the converter "on" you had a shot at hearing any 1 MHz segment of either the low or high PSB on your car radio. Supposedly the best reception was in the center of the frequency coverage (about 1100 kHz on the car

This converter was put out by JM Industries, a small company in New Jersey.

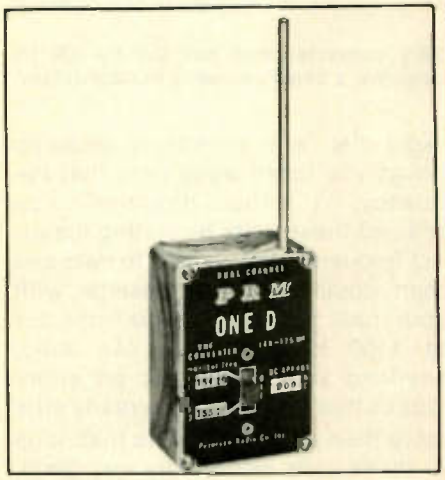
radio dial) with sensitivity dropping off as you tuned away from that frequency in either direction. You ordered these units by stating the exact frequency you wanted to hear and then would get your converter with your main frequency set to come out at 1100 kHz on your car radio, anything you might hear on either side of that frequency was really little more than a bonus. Fact is that none of these units were really very good, at best, and seldom offered reception of stations more than a mile away from the vehicle. Some of the con-

verters which fit into this era and achieved some popularity included the Petersen MC-1, one from JM Industries, and another from International Crystal.

An interesting innovation in this area came forward from Tompkins Radio Products. Their idea was to offer more than 10 MHz of coverage with the output frequency fixed at 1500 kHz on the car radio. Tuning was accomplished by a frequency control selector on the converter itself. In this manner, the owner might tune from 150 to 164 MHz or from 33 to 48 MHz via one converter. There were many models of the Tompkins Radio converter made for all sorts of commercial and ham frequency ranges and these units actually performed quite nicely and were a big set up from the other mobile converters. These units, called "Tunaverters," even offered a squelch unit in some models, while other models had a crystal socket to permit you to instantly zero in on any one particular frequency of high interest.

I can't zoom past my discussion of early PSB converters without making mention of the several wireless

A clever innovation from Tompkins Radio Products.

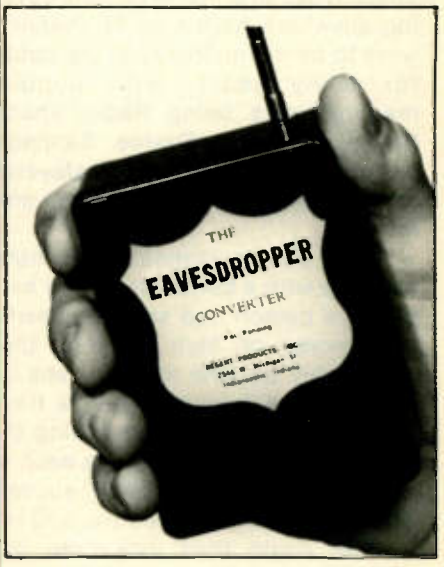


By the magic of wireless, the Peterson PRM-1D re-transmitted PSB band signals.

Trojan's Piggy Back wireless converter.

broadcasting types which appeared for a brief time. The idea was that all you had to do was to place one of these converters *near* an AM radio receiver (no physical connection) and the units would pick up the PSB and cause it to be replayed through the radio. Models I saw came from several companies and included the Trojan "Piggy Back" and the Peterson PRM-ID. Another entry was called the "Eavesdropper" and was produced by "Regent" (*not* Regency) of (you guessed it) Indianapolis! It was a real hunk of junk, although none of these units really were especially good in bringing in anything but very close local stations.

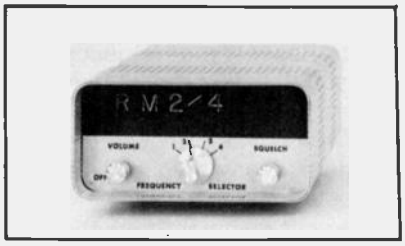
Scanner manufacturers then decided that monitor fans would probably be mostly interested in fixed frequency receivers since I suspect they figured that after tuning around for a



The Eavesdropper was a product of "Regent" in Indianapolis.

Regency marketed this single-channel monitor in the early 1960's.

while it all boiled down to only 1 or 2 frequencies of real interest and it might be easier to locate them on a fixed frequency receiver. They also realized that there was a big potential market for such receivers by members of volunteer fire departments and ambulance services. At that point up popped Regency with a single-channel "Monitoradio." Peterson counter attacked with a 4 channel receiver called the RM2/4. Regency jumped back with a 12 channel unit which could be used at either mobile or base station installation.



Anybody out there remember the RM 2/4 from Petersen?

These types of units, in models covering anywhere from 4 to 24 channels were to be the mainstay of the hobby for many years, with popular manufacturers being Radio Shack, Regency, Sonar, Pearce Simpson, Fanon/Courier, Bearcat, Lafayette, Craig, Sears, and RCA to name only a few.

At one point someone (somewhere) came up with a better idea. They said that if a person had several specific frequencies of high interest, they would only be able to keep tabs on one of those frequencies at a time. Why not devise a way of having the receiver scan over or sample each of those frequencies in rapid succession to see if any were active, and the receiver could then lock onto any signals heard? That was the inspiration for the first scanner monitor receiver in the late 1960's. Bearcat, Regency and Radio Shack were there in the early days, although Bearcat has always claimed to have invented the scanner. And yes, even Sonar was there and marketing an ineptly designed 8 channel bomb which didn't even offer the listener the chance to lock-out any temporarily unwanted frequencies.

Eventually there was the idea to incorporate into the design of scanners a frequency synthesizer which would enable the user to "punch in" the frequencies to be heard via means of a

Squires Sanders offered this slick looking 6 channel carry-along monitor but it didn't achieve any popularity.

programmable keyboard. The current top rated keyboard programmable scanners such as the Radio Shack PRO-2002 and the Bearcat 300 are the culmination of this technique, but we don't have to look back too far into history to see the Tennelec MCP-1 "Memory Scan." That was one of the first keyboard programmables to arrive, complete with frequency book telling you the binary codes to use in order to hear various frequencies. This monstrosity was not only a pain to program, it was also complicated to use. To boot, it was so filled with intermod, images, and birdies that customers howled long and loud. The manufacturer tried to bring out several versions of the "Memory Scan" but it was too late; nobody wanted them and Tennelec left the marketplace.

This 12-channel Regency monitor was typical of the style this company produced in many versions over a several year period.

To a scanner freak, such as myself, looking back over the evolution of the monitoring receiver and scanner, it seems ironic that while Regency got the ball rolling on everything, an objective assessment of the contemporary scanner scene quickly reveals that somewhere along the line the "ball" was snatched away from this company and all of the recent scoring in this field has been done by Radio Shack (Realistic) and Electra (Bearcat). While current Regency models are certainly well built and serviceable, when it comes to producing advanced and sophisticated scanners with large readout numbers and lots of extra features, combined with an aggressive marketing campaign to reach the public with their product message, Regency is running a *very* distant third. Too bad, and I wonder what happened to cause Regency to sit by so idly and let their leadership in this area be whisked away by others. Hopefully the brass at Regency will compare their current models

Looks like Sonar tried to make use of some leftover 24 position CB channel selectors. The result was this abomination called the FR-2513.

with the competition and realize that many of us are waiting for them to join in the great one-upmanship scanner design battle which is being waged by Realistic and Bearcat. C'mon Regency, don't just sit there!

Oh, you ask where the pioneer VHF monitors got their frequency data? Mostly I would say that they compiled their own listings and swapped with other interested parties. Some in-the-know monitors were able to obtain copies of some early registries of communications systems which were produced by Milton Sleeper of Great Barrington, Mass. (and earlier from Mineola, N.Y.) starting in the 1940's. I think that these were brought out in somewhat of a limited basis until at least the early 1960's. In the 1960's several other communications data publishing sources appeared, such as Arcata Information Service, CRB

An early scanner effort by Sonar, except they forgot to add channel lockouts.

Research, and Police Call. Arcata called it quits after a while. CRB Research is still going strong with their popular publications. Police Call apparently started with a single edition covering only the Los Angeles area and then expanded with "mass media" coverage of other areas—all edited by the same person who commenced the operation in the 1960's, although in earlier days (for reasons I have never understood) his name was spelled differently than it is these days. (Why?)

And that's how the road went from the 1940's to 1981—the good, the bad, ugly, and even Sonar which I think was always in a class by itself.

One of the all-time great disasters, the infamous Tennelec Memory Scan. It was best put to use as a door stop.

Alternative Radio

Pirates-Spies-Clandestines

So you want some unusual DX. Then here we go with more free radio on the Alternative Radio Network! And it is not all on the shortwaves either. Some stations are operating on the mediumwave and FM bands as well. For example, listeners in the lower Southeast might want to try for WCNY-FM on the frequency of 104.1 mHz. This brand new FM free radio operation features the top forty Country and Western hits. Scheduled hours of operation are 7:00 to 10:00 p.m. Eastern Time during the week and 10:00 a.m. to 2:00 p.m. on weekends. WCNY's DJ, known as "The Big J," says to tell all of you that he welcomes reception reports and will reply with his station's QSL card. Reports go via Free Radio Campaign-USA. You may hear a more current address for FRC-USA announced, but in the event that you do not, reports sent to FRC-USA, R. No. 2, Box 542, Wescosville, PA 18106 will probably get to WCNY-FM, although it may take a little longer.

You say your FM receiver is on the blink. Well, West Coast readers might have the opportunity to hear free radio on their car radios. An old-time broadcast band pirate has recently been reactivated. This is California's KDOR, which has been heard on 820 kHz with apparently high power. The station features soft rock with some country. At least on some occasions it has also used the unusual identification of "Chicken Radio for the Masses." Sorry, we do not have any information on how to QSL this one.

A new outlet on the shortwaves is WTBJ, Radio Seven Thousand. As you probably already suspected, it is using a frequency of 7000 kHz. WTBJ broadcasts Saturday evenings with thirty minute programs between 6:00 and 10:00 Central Time. This one should be of special interest to those in the upper Midwest, as the station features music by groups from the states of Iowa, Wisconsin, Minnesota, North Dakota, and South Dakota. You will also hear reports of off-beat news items and wrestling coverage. This is another station which welcomes reception reports and says it will QSL promptly. Eventually WTBJ plans to use FRC-USA for reporting, but we suggest you listen for the latest information on how to reach them. In addition to the above programs and times, WTBJ will broadcast special test transmissions during daylight hours. The station intends to work hard to build up a loyal audience, so give them a listen.

The old mailbox has been overflowing lately, and we can report that yet another station has returned to the air. WPOT-AM DJ Chuck Wood informs us that after having solved some transmitter problems they are now back on the air with 125 to 150 watts of power. He notes that those in the Northeastern part of the United States probably have the best chance of hearing them, but they have also had reports of excellent reception in the Midwest. The station uses a hill top location, and the results have obviously been good.

A view of the studio of WPOT-AM.

WPOT-AM is a versatile station. They can be heard on the shortwaves in the general vicinity of 7425 kHz. However, they also use several frequencies just above the standard broadcast band. These are 1610, 1620, and 1640 kHz. WPOT Rock and Roll Radio features a mixture of comedy and music with a good DJ. We think you will like the sound. Reception reports sent via FRC-USA will be verified promptly.

We have also had a report from California of reception of Radio Music International around 0730 GMT with super strong signals on 6580 kHz. This one has a very professional sound, and there is a variety of

music to be heard including some classic oldies. Radio Music International boasts that it broadcasts with 50,000 watts, but we have got to believe that is something of an exaggeration, despite the unusually powerful signals! At least at present, Radio Music International does not appear to be taking reception reports.

A new pirate, claiming to be on the West Coast of Florida, has also been reported. This is Radio Surfside on 6225 and possibly 6276 kHz. It has been heard late afternoons, and we have been informed it uses a DX60 transmitter. On at least one occasion Radio Surfside gave a phone number which listeners could use to talk with them. If you get the chance to call them you might request a QSL.

Finally, mention should be made of one shortwave pirate which has been transmitting for quite awhile. Be listening for WARG and the Ray Haber Show, usually sometime after midnight Eastern Time. Normally the frequency in use is between 6950 and 6960 kHz, but we understand that WARG has also been heard on 6910. Popular with WARG listeners is the opportunity to call Ray on the phone and talk with him. You can also ask for a QSL, but we understand that only a very few have actually been received.

While several new stations have come on the air in recent months and others have been reactivated, one more must be added to the list of those which have been busted. This is WPOT-FM, which is an entirely separate operation from WPOT-AM. The two stations are not related in any way. During March WPOT-FM was closed down by the FCC. It had been operating on 108.5 mHz. out of Sayville, New York, some forty miles out on Long Island from New York City's LaGuardia Airport.

The FCC claimed the station's transmissions could have *been* interfering with navigation equipment at LaGuardia. However, the closest active frequency used by any radio facility at that airport is 109.0, which sends out only a signal for *testing* VOR receiver operation. The actual navigation facility at LaGuardia uses 113.1 mHz! In view of the fact that WPOT-FM was located forty miles away from the airport it is most questionable that it might have caused interference on any frequency. According to Uncle Charlie WPOT-FM is by no means its only victim in the New York City area. The FCC claims to have detected twelve radio pirates in that vicinity in the last two years alone.

WPOT-FM featured rock music and was a popular station. Apparently some of its listeners were not even aware of its pirate status. They just happened to feel that it played better music than other local stations. Some of its fans lived as much as a dozen miles away from Sayville. They will miss WPOT-FM, whose young operator says he *may* yet have another go at it again sometime in the future.

Although WPOT-FM is gone, you can see that the Alternative Radio Network continues to be very active. For a DX challenge there is nothing better than the elusive stations that are part of this movement. We think you will find them something out of the ordinary, and in searching for them there is always the real possibility that you may hear a new one that no one has ever logged before.

STATION KRKY

"P. Michael Miller," the Chief Engineer of Station KRKY has written to us with some information about his new station which was being made ready for operation as of late April and was projected to be on the air before June. KRKY, he reports, has been on the drawing boards for 2 years and it is Miller's hope that it will be one of the most professional ventures in the field of free radio. All persons connected with KRKY are claimed to be licensed FCC techs and several are actually employed in the broadcast industry.

Here is a modified description of KRKY: The transmitter, which operates on 1610 kHz with 125 watts into a 50 foot vertical antenna, is located more than 9,500 feet up in the Rocky Mountains and overlooks metropolitan Denver. Getting power to the transmitter was accomplished by tapping the output of a transformer located at a warning light used on an abandoned mine about a mile away. The power line runs through treetops. The power source was located while flying over the area at night and checking for night and warning lights used at abandoned mine sites. The transmitter is accessible only by foot and is 12 miles from the control point. The control point is connected to the transmitter via a UHF link.

The idea behind this method of operation is to have a disposable and almost-impossible-to-find transmitter site. If it is located by the FCC, they can

set up another transmitter without having their studio location "busted." A reverse UHF link from the transmitter to the studio is connected to security and tamper alarms. A ready-to-go backup transmitter is a future goal of KRKY and it is planned to alternate between both transmitter sites to help avoid detection. Another goal is running both transmitters up to their full 250 watt potential and feeding them into phased array antennas.

KRKY says they will QSL and their address will be announced over the air, mixed in with their music format (pop oriented and heavy on the oldies). The station's slogan is "KRKY Rocks the Rockies." Miller's letter ended with thanks to *S9* for reporting on *alternative* (or *free*) radio.

This column eagerly seeks reports from listeners regarding the activities of "free radio" (unlicensed) broadcasters. That includes skeds, QSL's, photos or any other similar news and items. Stations can be heard on any band and from any area of the world. Got a station of your own? Send along your frequency and schedule—we will see if we can get you a wider listening audience!

BIRTH ANNOUNCEMENT

This column received a nifty looking birth announcement from "Radio Free People," signed by The Kingfish and Little Troubles. This station went on the air on March 28th at 10 PM EST using a frequency of 1605 kHz. RFP strives to serve the tri-state area of Michigan, Indiana and Ohio with a 100

watt transmitter. Programming includes a talk show about shortwave radio, plus rebroadcast from major SW stations, and some rock music from overseas sources. On their opening broadcast they featured the music of the West German group "Kraftwerk." The station sked at press time was Thursdays, 10 PM to midnight; Sundays, noon to 1 PM and 10 PM to midnight; it was not specified if this was CST or EST, but our guess is EST.

DX KORNER

C.M. STANBURY II REPORTS ON THE INTERNATIONAL SHORTWAVE SCENE

Send SWL reports to:
C.M. Stanbury II
c/o S9 Magazine
14 Vanderventer Avenue
Port Washington, N.Y. 11050

A BIZARRE COINCIDENCE???

Beginning on the evening of January 22, continuing well past midnight, then repeated in prime time Jan. 28, ABC TV aired a three-hour special on the secret negotiations which eventually led to the release of the U.S. hostages from Iran. In the process of covering that story ABC may have, without knowing it, shed a strange new light on the mysterious Costa Rican station, Radio Noticias del Continente.

Among those who worked hardest on behalf of the Carter Administration, according to ABC, were a prominent French socialist lawyer, an Argentine exile businessman (who fled that country after the death of Juan Peron) with French and Panamanian connections, and (surprising many Americans) the Panama government itself. Meanwhile Radio Noticias del Continente is officially licensed as a commercial station but has very few advertisers. Those few have included a French socialist newspaper and a major export/import firm with headquarters in Panama. Many of the station's programs are directed primarily at Argentina (supposedly with a heavy Peronist tinge). And on the day the Canal was formally handed over to Panama (Oct. 1, 1979), Radio Noticias del Continente worked directly with the official Panamanian government network (then known as Radio Libertad) to cover the event.

All these things could of course be coincidence. On the other hand, they may be important new clues as to how an apparent right wing station during the Ford Administration became an *apparent* left wing voice during the Carter Administration. These "coincidences" might also explain how Radio Noticias del Continente was able to stay on the air so long despite tremendous pressure upon the Costa Rican government to silence it. And certainly those oversimplified versions of the Costa Rican scenario which have appeared elsewhere in the DX media (eg. Radio Canada International's "DX Digest") can no longer be accepted at face value.

CENTRAL AMERICA

As this is being written, Radio Noticias de Continente is still operating on 9615 kHz with no apparent change in political orientation. The Panamanian Radio Libertad now calls itself simply Servicio Nacional de Radiodifusion and its main Panama city transmitter is sometimes heard by North American Broadcast Band DXers on 840 kHz. If you live too close to Louisville where WHAS holds down that spot on the dial, try 770 kHz for SNR's relay at Chitre.

Beginning a few days before ABC made its revelations, the Salvadorean clandestine Radio Liberacion ("La Voz de Revolucion") turned up quite regularly on the 8 MHz marine band with stridently anti-U.S. broadcasts. The most often reported frequency was 8243 kHz.

By the time you read this Radio Liberacion may well be history but there's still Central American DX to be logged on this band: specifically Radiographica Costarricense's coast station TIM at Puerto Limon on the Caribbean coast. Watch for a Morse code ID marker on 8478 kHz. Other frequencies upon which TIM IDs have been reported include 4297 and 13100 kHz.

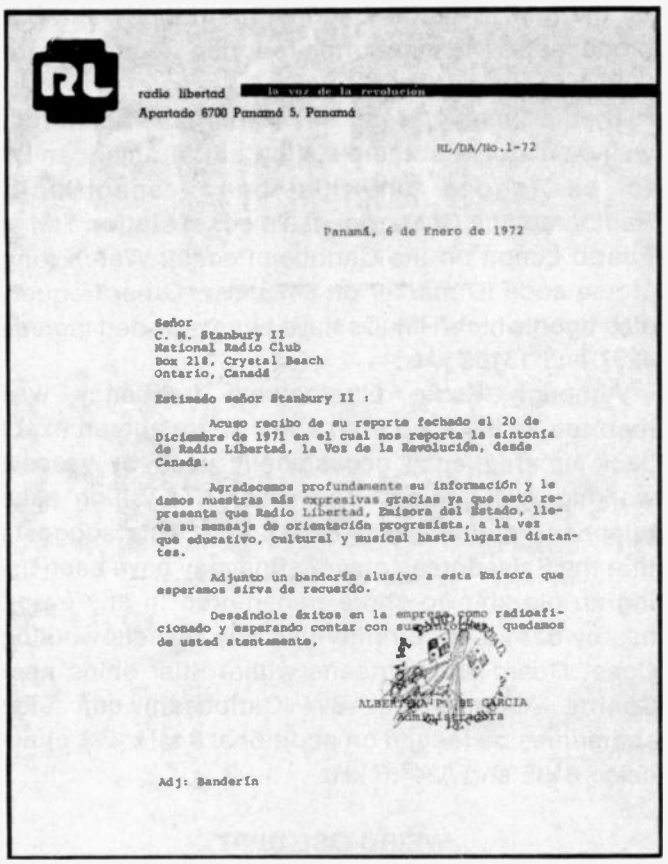
Although Radio Liberacion's frequency was reported as 8243, up until a few years ago an exact back up frequency occasionally used by vessels working WOM Miami and other AT&T high seas telephone stations was 8242.8 kHz. This suggests that the Salvadorean clandestine may have been using an old ship to shore transmitter. In any event, nearby 8241.5 is currently used by vessels working Coast Guard New Orleans while other ships near Central America (i.e. SW Caribbean) can also sometimes be logged on additional 8 MHz CG channels - 8195 and 8244.6 kHz.

WEIRD QSL DEPT.

Our QSL from the Panamanian Radio Libertad is displayed in Figure 1. Note that after our name ap-

pear the words "National Radio Club." The truth is that we were at war with the "official" NRC at that time over such things as Radio Americas (into which the Bay of Pigs station, Radio Swan, had subsequently evolved), ionospheric radio propagation and portable broadcast stations. In fact we had been expelled from the NRC because of our heretical views (all of which turned out to be at least partially correct) and their publication "DX News" even featured an anti-Stanbury comic strip ("Captain Glotz"). As a matter of principle we continued to use up our supply of NRC report forms and thus it was Radio Libertad who unwittingly succeeded in preserving the feud in our QSL collection.

An equally strange QSL was obtained for beacon "LA" which was once operated on the BCB (1600 kHz) at La Lima (near San Pedro Sula) by the Honduran Air Service (SAHSA). After a couple of our reception reports were ignored, a self prepared verification card (Figure II) was finally signed and returned, not by SAHSA, but by the Tropical Radio Telegraph Co. In an attempt to wrap up loose ends we wrote TRT HQ in Boston and asked what connection they had with SAHSA. TRT replied there wasn't any connection at all. Despite this we have always considered the card to be a valid QSL.



radio libertad — la voz de la revolución
Apartado 6700 Panamá 5, Panamá

RL/DA/No.1-72

Panamá, 6 de Enero de 1972

Señor
C. M. Stanbury II
National Radio Club
Box 218, Crystal Beach
Ontario, Canadá

Estimado señor Stanbury II :

Acuso recibo de su reporte fechado el 20 de Diciembre de 1971 en el cual nos reporta la sintonía de Radio Libertad, la Voz de la Revolución, desde Canadá.

Agradecemos profundamente su información y le damos nuestras más expresivas gracias ya que esto representa que Radio Libertad, Emisora del Estado, lleva su mensaje de orientación progresista, a la vez que educativo, cultural y musical hasta lugares distantes.

Adjunto un banderín alusivo a esta Emisora que esperamos sirva de recuerdo.

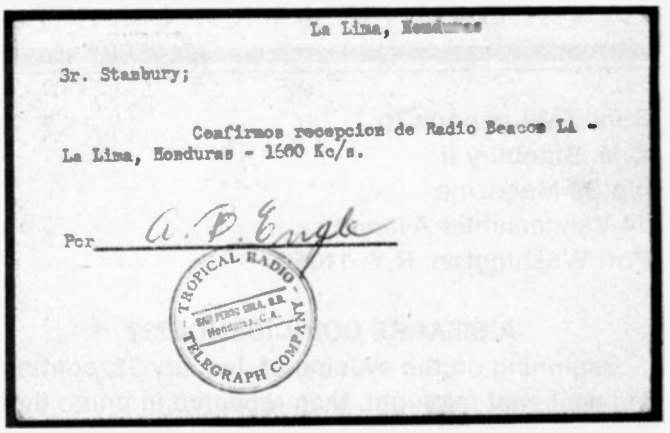
Deseándole éxitos en la empresa como radioaficionado y esperando contar con su [illegible] quedamos de usted atentamente,

ALBERTO [illegible] DE GARCIA
Administradora

Adj: Banderín

FIGURE I: Doubly "historic" QSL from the Panamanian Radio Libertad.

If any of our readers have encountered similarly unusual experiences while collecting QSLs, we'd like to hear about them. Please *don't* send the verification itself but a photostat would be of interest.



La Lima, Honduras

Sr. Stanbury;

Confirmos recepcion de Radio Beacon LA - La Lima, Honduras - 1600 Kc/s.

Por a. D. Engle

TROPICAL RADIO TELEGRAPH COMPANY
SAN PEDRO SULA, H.N.
Honduras, C. A.

FIGURE II: Self prepared QSL for Honduran BCB beacon. Station now operates on longwave.

MORE BEACONS

Contrary to what we reported last month, that transmitter listed in *The Beacon Guide* at Concepcion, Bolivia on 1620 kHz is CEP while the one heard near 1613 is CPP. Same beacon with slight change in ID and frequency, or two different stations? Meanwhile it seems several new beacons have come on the air just below the BCB since this listing was compiled. Among those reported by Ken Stryker (who helped put the guide together) are BG Fairfax (Kansas) on 513, TO Topeka on 521, and HEH Newark (Ohio) on 524 kHz. And, oh yes, the La Lima beacon is operating these days as LAL on 370 kHz.

DUTCH DX

In previous columns we have noticed that DX programs aired by international SWBC stations often serve propaganda purposes—specifically Radio Canada International's "DX Digest" and, to a lesser extent, "Sweden Calling DXers" (the latter can more accurately be described as counter-propaganda). But the process is even better illustrated by the Fritz Greveling case. Until last summer, Greveling was the host of Radio Netherlands' very popular "DX Jukebox" program. Then he left to take, as it turned out, a position with Radio RSA, the South African government's right wing propaganda voice. In fact he took over as the host of Radio RSA's own DX program thus undoubtedly bringing much of his large Radio Netherlands audience with him. Before taking up his new propaganda assignment, he was inter-

viewed at length by Radio Canada International, an interview which further served to promote his upcoming South African broadcasts. Moreover Greveling continued to do special features for DX Jukebox even after joining Radio RSA's staff.

In addition to the DX program, Greveling is also a news and commentary reader for Radio RSA's Dutch language service. Simultaneously, Greveling became South African correspondent for TROS, a major Dutch domestic broadcast service. Not surprisingly, TROS didn't bother to tell its audience that their man in Johannesburg was a propagandist for the South African government but a prominent Dutch DXer, Michiel Schaay, succeeded in alerting the press and the whole affair became a major broadcast scandal in Holland. It is not the first such scandal. In 1978 a prominent politician who headed the Dutch Post Office Council was forced to resign after documents in the official government archives indicated that he had collaborated with the Nazis during World War II. The Dutch Post Office has ultimate technical authority over all broadcast and most Dutch utility transmitters as well as attempting to track down the thousands of pirates which operate from the Netherlands. In other words, the Dutch Post Office is a combination FCC and AT&T.

Dutch Post Office transmissions, incidentally, are not difficult to log in North America. At night you can try for the Schenveningen high seas ship to shore telephone transmitter on 8768.5 kHz (vessels in contact with this transmitter are on 8244.6). Meanwhile Morse code ID markers have been reported from Schenveningen on 4250 (PCH20), 6404 (PCH30), 8622 (PCH41), 8634.4 (PCH32), 12853.5 (PCH52) and 17007 kHz (PCH61).

MORE INTRIGUE

As just noted, we've made some uncomplimentary comments in the past few columns on the Canadian Broadcasting Corp's external service, Radio Canada International. But this situation has taken on more serious implications as a result of the current Canadian constitutional controversy. The problem arises from CBC-TV broadcasts of highly confidential, classified, Canadian government TELEX's and transcripts of secret conversations—massive intercepts which were very embarrassing to the federal government in its ongoing war with most of the provinces. Complicating this James Bond/Orpheus Thrush style plot still further, one of the intercepted TELEX's quotes the Canadian High Commissioner to London as suggesting the U.S. (among others) might have bugged her phone.

In point of fact the United States has a highly legitimate national security interest in this situation: devolution (as a reaction against federally proposed constitutional changes) of the 10 present Canadian provinces into temporarily independent mini-states would create incalculable political chaos on America's northern defense parameter: another Central America with oil instead of bananas. Moreover the U.S. National Security Agency (the ultimate "DX club") not only has the motive but also the means to monitor both phone calls and TELEX messages on a global scale.

So how did the CBC obtain this classified material? Was the NSA (for any other intelligence agency) somehow involved in the process? Does Canada have a government within a government? At the moment these are merely questions—but certainly not far fetched. According to 1976 revelations in the British press, both Canada and Britain actively participate in NSA's monitoring network. Along with this we must also conclude that CBC's Radio Canada International, based on recent propaganda activities (i.e. cover up of potential SW interference from U.S. OTH radar, concealment of links between BBC, MS and the CIA, one sided coverage of the Costa Rican scenario, and the South African caper), has some unusual connections of its own.

In the last chapter of our "underground" novel "Anti-Matter," we satirically described an intelligence war fought for control of Canada between the Pentagon (of which the NSA is a part) and the CIA. Suddenly our fictional underground begins to sound something like fact. Incidentally, paperback copies of our "filthy subversive" book are still available from Dustbooks (Box 100, Paradise, CA 95969) for $2.95 plus another $1 for handling and mailing. The hardcover is $7.95 and if you tell them you read about it in DX Korner they won't charge handling and postage on hardcover orders. Who knows—if things continue to develop in Canada, "Anti-Matter" might yet turn out to be a bestseller!

But, bestseller or not, there are at least two more strange twists to the script. For three months prior to the constitutional revelations, all RCI newscasts were cancelled due to a strike by CBC journalists in Quebec. Throughout this whole period "DX Digest" was the closest thing to a newscast produced by Radio Canada International. As Orpheus Thrush tells us in "Anti-Matter"—"My first short wave job was editing a program for an electronic hobbyist. The real assignment was to suppress any report of rare reception which might shed light on Pentagon operations." In reality, of course, this would apply to several SW DXcasts and a whole variety of political interests.

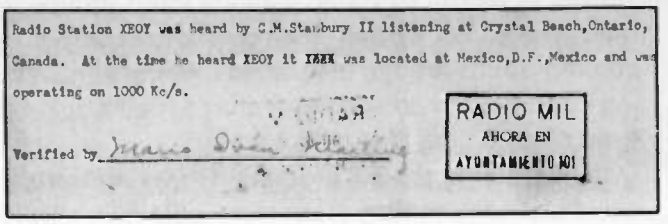
On March 6 Radio Noticias del Continente (TIRLR) was finally silenced by the Costa Rican government. During a transmission at 2130 EST March 3, and again at 1940 March 5, TIRLR broadcast a list of those stations which had sent them messages of support. Included on that list was Radio Canada International: the same RCI whose "DX Digest" program has consistently portrayed Noticias del Continente as a Communist station. Yes, all those predictions hidden in the pages of "Anti-Matter" seem to be coming true.

S9's FREQUENCY GUIDE TO DX PROGRAMS

KHZ	STATION & PROGRAM
5960	R. Canada International, "DX Digest"
6160	R. Netherlands, "DX Jukebox"
9590	R. Netherlands, "DX Jukebox"
9605	R. Canada International, "DX Digest"
9715	R. Netherlands, "DX Jukebox"
9765	R. Canada International, "DX Digest"
11705	R. Sweden International, "Sweden Calling DXers"
11945	R. Canada International, "DX Digest"
15150	R. Canada International, "DX Digest"
15220	R. Netherlands, "DX Jukebox"
15270	R. Sweden International, "Sweden Calling DXers"
15325	R. Canada International, "DX Digest"
17605	R. Netherlands, "DX Jukebox"
17875	R. Canada International, "DX Digest"
21685	R. Netherlands, "DX Jukebox"

TIME (EST)	DAY & NOTES
2000/2300	Sunday (will be 5 minutes later if strike is ended)
2150/0050	Thurs. & Fri. respectively, Bonaire relay
2150	Thursday, Bonaire relay
2000	Sunday (will be 5 minutes later if strike is ended)
0050	Fri. (2150 PST Thursday), Bonaire relay
2300	Sunday (will be 5 minutes later if strike is ended)
1800/2130	Tuesday
1630	Sat. (will be 5 minutes later if strike is ended)
1630	Sat. (will be 5 minutes later if strike is ended)
1350/1550	Thursday, Madagasgar relay
1800	Tuesday
1435	Sunday
1350/1550	Thursday
1435	Sunday
1550	Thursday, Bonaire relay

For EDT add 1 hour, EST equals CDT, for MDT subtract 1 hour, for PDT subtract 2 hours.



MORE MEXICAN DX

During the summer months rare reception on the lower shortwave frequencies generally declines. An exception to this rule are those relatively low powered Mexican broadcast relays on the 49 Meter band. With long hours of daylight, interference from much higher powered 6 MHz international SWBC transmitters in Europe and Asia is considerably reduced.

One of the easiest 49M Mexicans to log is La Voz de America Latina's relay on 6165 kHz, XEWW. A much more difficult catch is Radio Educacion's outlet on 6185—difficult because it is only on the air irregularly. This pair are especially interesting DX: when the mysterious Radio Noticias del Continente was closed by the Costa Rican government, these stations allegedly sent them messages of support. And there have even been hints that Noticias del Continente programs might be broadcast from Mexico.

Still in the capitol, Radio Mil has recently reactivated relay varying around 6010 kHz. Moving to the gulf coast, the "Pantera" (Panther) station operates from Merida on 6105 kHz. It is even more widely heard than XEWW. At Vera Cruz, Radio Nuclear Oro (Golden Atom) is on 6020. Out west, the University of Sonora (Hermosillio) has a transmitter on 6115 and the University of San Luis Potosi has a similar non-commercial outlet on 6045 kHz. Both of these sometimes carry the same programs as Radio Educacion.

Best times at present for 49 Meter Mexican receptions are around 0700, 1900 and 0100 EST. However if you live in the Southern or Southwestern states, you may be able to listen to some stations all day long.

TOMCATTIN' WITH TOMCAT!

ACROSS THE CHANNELS WITH S9'S EDITOR TOM KNEITEL, TOMCAT/ SSB-13

OVERSEAS THOUGHTS: From what I read in overseas CB publications and hear on the frequencies, the CB lingo that we all knew and hated is alive and well in several areas such as Great Britain. In fact, the cassette tape we mentioned a few months back which suggests to British CB'ers the various ways of using CB lingo emphasizes the use of terms such as "road tar," "pregnant roller skate," "rocking chair," and "goodbuddy"—all of which have mostly vanished from the frequencies in the U.S. and Canada. In particular, the word "goodbuddy" has (for at least 4 years now) taken on a rather strange meaning which makes it hardly the thing to use when addressing a trucker or anybody else who might possibly be big enough to lay a fist sandwich on the side of your noggin. Madison Avenue, in its usual faltering attempt to be *hip* has, in fact, taken this word and placed it in radio and TV commercials for a medical preparation—depicting a trucker asking for the product in a pharmacy. In view of the currently popular use of this word in these parts, the specific product involved might have stayed clear of it altogether—and when the trucker tells the pharmacist the next morning that, "I feel great, thanks to you, goodbuddy!" it is perhaps one of the highpoints of unintentional *camp*! I've received dozens of letters from readers who have commented on that commercial; pointing out the curious blunder. On the other hand, maybe the goodbuddies who created that TV commercial were trying to say something to the world!

BACKSTAIRS AT THE FCC: There were all sorts of rumors afoot around February relating to possible staff changes at the FCC which would have a direct bearing on the lives and events relating to the CB service. One supposedly "confirmed" rumor had it that Carlos Roberts was leaving the FCC and would be entering private industry. That tale was so popular that it even appeared in several usually accurate CB club newsletters. Secondarily, and connected to the supposed "Carlos Roberts" story was the one about James McKinney of the Field Operations Bureau being moved into Roberts' job. Both of these stories were repeated over and over on the frequencies and were contained in numerous messages which reached me at the magazine. As of the time I write this (May) it does not seem that either of these stories was true.

It was interesting, however, to note the reaction that the tales evoked in the CB fraternity. Many CB'ers feel that Carlos Roberts has been a pretty straight guy in respect to the CB operations at the FCC, and is one of the best friends the idea of exclusive Sideband frequencies ever had—although I think that there is little doubt that his position at the FCC is not a strong enough power base to push through worthwhile ideas when they are under fire from other divisions.

So the thought that Roberts might be leaving the FCC generally evoked either apathy or sadness. However the notion that Jim McKinney might be moving into Robert's job brought about interesting extremes in emotions! One can hardly look at McKinney's track record in regard to the CB service and say that he has been anything but hostile to the service, its users, and the majority of those persons who made their feelings known to me about the possibilities of McKinney in Roberts' job as being a disaster, reading about 8 on the Richter Scale.

Interestingly, though, some saw a ray of light in all of this. They felt that CB'ers might be far better off with McKinney extracted from his present position as head of the FCC's so-called *gestapo* and transferred to what appears to be an in-house desk job having rather limited influence. I can't even attempt to evaluate such an opinion, but I do know that despite the fact that many CB type folks have a

low opinion of Jim McKinney, the brass at the FCC think he's the greatest thing since the invention of *Dr. Brown's Cel-Ray Tonic*. Some FCC insiders will tell you privately that McKinney is a definite contender for eventual high position in the agency, regardless of the fact that many CB folks have pins stuck in little effigies of him.

As a point of trivia to all of this, when I was preparing for publication the 2-part analysis of some of Jim McKinney's comments regarding Sidebanders, as stated to the 7 FCC Commissioners in the matter of exclusive Sideband frequencies, I received a highly charged landline call from a person at another CB publication. This person had gotten wind of our plans to pick some of these comments apart and was calling in an attempt to talk *S9* out of running the material. One of the reasons given being that McKinney's comments could not be used for publication! The whole idea was preposterous, of course, but I wonder what (or whom) was behind the landline attempting to talk us out of running the material relating to McKinney's comments. Well, we ran it anyway and never heard any more from those who attempted to hold back its publication.

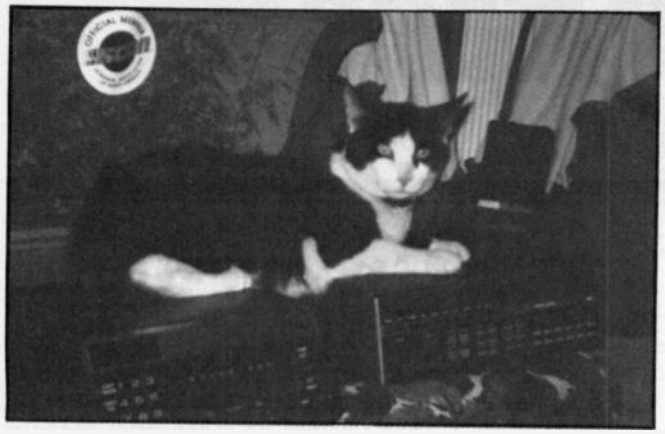
FOOD FOR THOUGHT: I notice that the Federal Aviation Administration (FAA) is being sued for "wholesale violation" of something called the "Administrative Procedures Act." Mr. Lawrence B. Smith, a fellow who was once a lawyer with the FAA says that Congress never authorized the agency to punish pilots and mechanics by suspending or revoking their licenses. Smith contends the agency prosecutes violation cases with "a host of procedures and policies" which very few people understand because they haven't been made into formal rules as required by law. One cannot help but wonder if it might be of value for some legal type people to see how or if the FCC might be complying with this "Administrative Procedures Act." Could be they've left themselves open to the same type of violation Mr. Smith claims is the problem at the FAA!

"HOW GOOD IS YOUR WORD?" DEPT.: Until recently if you wanted a typing job with the government you had to prove you could type 40 WPM with no more than three errors. That seems reasonable since private industry requires 60 WPM and nobody expects the bureaucratic establishment to operate at any more than 2/3 the efficiency of private industry. Problem is that the Office of Personnel Management has found out that nearly half of the job applicants can't even meet the minimal 40 WPM standards! Now the agency has done away with the test and substituted a system called "self certification." The job-seeker tells the agency how well he or she types and the agency accepts the job seeker's word for it. Nice deal, and we can see this policy evolving into other areas.

For instance, the FCC has established various CW (code) speed plateaus for obtaining various types of Amateur Radio licenses. Currently these are established at 5, 13 and 20 WPM. People have been known to fail the tests for ham tickets because they can't meet these speeds, and many potential hams tell me that they haven't even gone over to *Uncle Charlie*'s because they fear failing the speed test. Taking a hint from the way the government has now decided to test typists, maybe the FCC could do away with the costly and bothersome CW speed tests. You could just go down there and say how well you can copy CW and the agency accepts your word for it! You know that the 5, 13 and 20 WPM speed plateaus are only arbitrary ones established by the FCC; after all is said and done about "international regulations requiring that ham licensees need to demonstrate a knowledge of code," there is no actual speed in WPM set down in those regulations. For all those mysterious regulations care, the FCC could issue a person any so-called "grade" of ham ticket so long as the person was able to write down on a piece of paper a couple of *di*'s and *dah*'s and report that they represented CW—that would demonstrate a knowledge of CW. Besides, international regulations seem to be designed with the knowledge that nations will break them at their own convenience and the FCC has broken them with impunity several times in the past.

How about it, *Uncle Charlie*? Let's keep up with the times. Let all applicants for various types of licenses requiring tests certify themselves as being competent—just the way your employees can now do. If it's good enough for those on the public payroll, it certainly should be good enough for those who cough up the loot to meet that payroll. Fair is fair. Right?

"THAT DURN CAT" DEPT.: Reader Jerry Callam was kind enough to send along a snapshot of his cat, "Bandit," perched atop the Bear*cat* scanner! Jerry asked if this in any way resembles any other known cat, or tomcat, monitoring the bands. Well, Jerry, if you mean me I would comment only that unless I went on a crash diet the scanners would



probably end up the size of hand-helds within a few seconds. Jerry is President of the All Ohio Scanner Club, 104 Maplewood, Mt. Vernon, Ohio 43050, and says that he invites all scanner users throughout the Buckeye State to contact him about the AOSC, which began operations in 1979.

APPRISED OF A PRIZE: After they announced the Pulitzer Prizes for journalism last April I received a landline from Wes MacKenzie, SSB-3A464, of Pine Bluff, Arkansas. Wes said he was very disappointed that the award committee had somehow overlooked his favorite publication, especially after he thought we had struck home particularly well with several editorials this past year. Not only, reported Wes, did he immediately communicate his displeasure to the people who select the winners of the Pulitzer Prize, he also assured me that he would personally see to it that *S9* received a Pulitzer Prize. I didn't argue the point, in fact a few weeks later I received a parcel postmarked Pine Bluff with the words "Awards Committee" neatly printed across it.

A letter taped to the wrapping advised me that the Pulitzer Prize people told him that they were sorry but the journalism prize had already been awarded for this time around. Wes decided that, in view of that, he would issue his own award of honor. After hurriedly fumbling with the well-enclosed package I finally came upon the award, the alternate for the Pulitzer Prize—it was a plucked rubber chicken carefully lettered "Pullet Surprise awarded to Tomcat, 1981."

The *Pullet Surprise* now hangs proudly on the *S9* bulletin board. My readers always figure out how to save the day!

PRODUCT IDEAS: For any manufacturer who wants to select from either of two never-before-used "catchy" radar detector model names, reader N.C. Eschlen of Anniston, Ala., suggests: SMOKEY BEARER or SMOKEY BAND-AID. Pretty clever N.C. If the trend to dumping the dumb 55 MPH speed limits continues ol' Smokey and his picturetaker may be reduced to sitting by the side of local streets rather than on the Interstates. My pal Ziggy (a/k/a DIMWIT 255) in Mercury, Nevada, observes that after several years of "fuel conservation/shortage" propaganda and the rising cost of fuel, it's pretty funny to hear them talking about raising the 55 MPH speed limits around the country. Everybody ran out and bought little compact cars which can't do much more than 55 MPH without wearing a truss, and the majority of vehicles on the road which are capable of cruising comfortably at higher speeds are the 18-wheelers which seem to take a morbid delight in scaring the daylights out of the compact 4-wheelers. Zig reports that, all things considered, a mobile CB rig may come in much more useful for giving "18-wheeler Breaks" rather than "Smokey Breaks" in the near future!

Tomcat!

ON THE COUNTERS

S9'S MONTHLY PRODUCT REVIEW

NEW MOLDABLE PLASTIC COAX-SEAL

A new, quick and positive way to seal coax fittings from moisture and corrosion damage is now available. COAX-SEAL is a pliable, plastic material which is wound over coax fittings of any size or shape and then hand-molded giving a long-lasting, flexible waterproof and dustproof seal. This new material stays flexible at temperatures from -25° F. to 350° F.

COAX-SEAL maintains its sealing qualities regardless of movement of the coax. It also adheres to poly-vinyl or vinyl outer coax jackets. The material allows the quick decoupling of a coax fitting and also the re-sealing of the fitting using the same material. Application is by hand—simply roll off approximately 6" of COAX-SEAL, remove backing paper, wrap starting at outer covering and work towards fitting, allowing a ½ overlap as you go. After the wrap is completed, gently knead to

form a smooth surface and to force out any air.

COAX-SEAL comes in rolls, 60" long, ⅛" thick and ½" wide on backing paper. Packaged for pegboard display. 50 foot industrial rolls are also available.

Contact Universal Electronics, Inc., 1280 Aida Drive, Reynoldsburg, Ohio 43068, or mark 69 on Reader Service.

PRODUCT SPECIFICATION

PRODUCT NUMBER: 104 - COAX SEAL
1/16" x ½" on backing paper

USES: A hand-moldable, plastic mastic suitable for sealing a wide variety of materials, metals, plastics, vinyls, to accomplish a tenacious and waterproof, long-lasting seal for coaxial cable, fittings, CATV, marine electronics, antennas, feed lines and microwave work.

DESCRIPTION: A green, tacky, mastic material. Non-conductive.

VISCOSITY: ASTM D5-52, 100 gm load, 5 sec. = 7.0/10.0 mm

AGING CHARACTERISTICS: Non-hardening, non-oxidizing at ambient temperatures

TEMPERATURE RANGE: Apply between 50° F. to 90° F.

PERCENT SOLIDS: 98%

SOLVENT: None

OTHER PROPERTIES: Non-staining to paint, non-toxic and non-corrosive. Material stays flexible and maintains seal over extreme range of temperatures. Will not crack at -20°F. Will not slump -1 hr. @ 350°F.

OPTIMUM CURE CYCLE: Not curable

APPLICATIONS EQUIPMENT: Hand applied

PACKAGING: Packed in resale cartons, 1/16" thick x ½ " wide, peelable paper backed, 60" rolls. Resale package for pegboards or counter use. Also supplied in industrial rolls, 1/16" x ½" roll wide on peelable backing paper, 50' roll for use by CATV installers, microwave work and other installation uses.

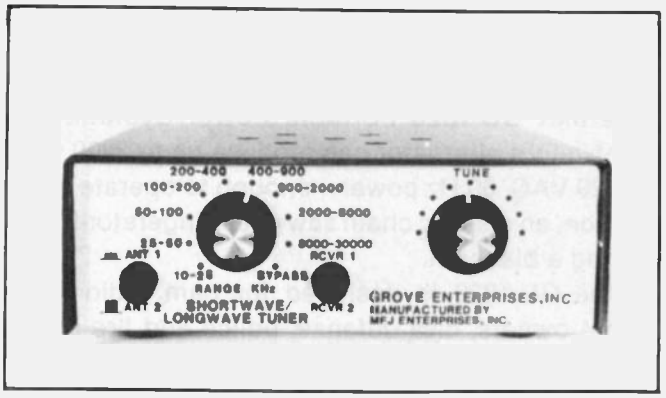
SHORTWAVE/LONGWAVE TUNER

Designed to enhance reception throughout the 10 kHz through 30 MHz spectrum, this new Shortwave/Longwave antenna tuner boasts the widest frequency coverage of any tuner on the market.

The wideband tuner preselects desired signals while reducing or eliminating intermodulation, crossmodulation, images and desensitization from unwanted signals.

Front-panel switching allows push-button selection of two antennas and two receivers, while a front tuning dial permits signal enhancement.

Guaranteed to improve reception on any shortwave or longwave receiver! Contact Grove Enterprises Inc., Brasstown, NC 28902, for more information.



SMALLER BIG STICK!

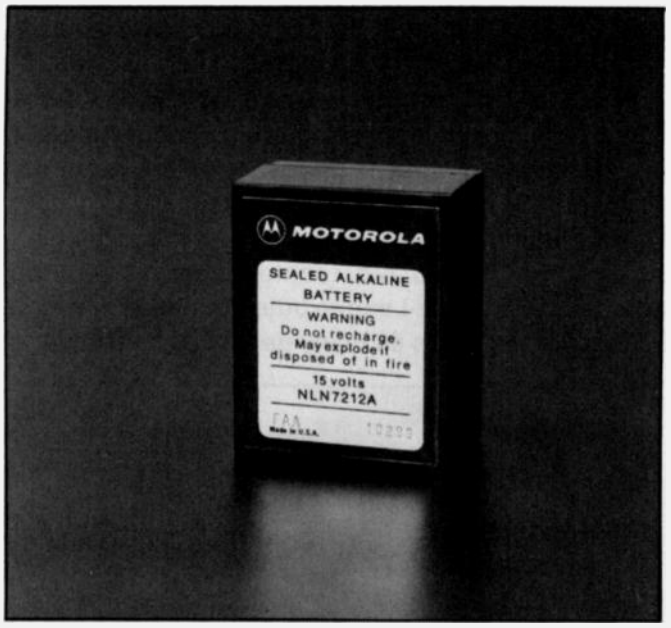
Less means more with new Shakespeare antenna.

Shakespeare is justly proud of the fiberglass Super Big Stick CB base station antenna. CBers love the performance and dealers love the demand...but that demand caused a problem. The original Super Big Stick was just two feet *too* long for UPS shipment. So, the Shakespeare engineers came up with an exclusive folded coaxial sleeve and phasing network that trimmed twenty-four inches (from 18 feet to 16 feet) off the Super Big Stick and the UPS/Super Big Stick was born! The change also resulted in more gain and more power...all this, and now it's all more available. For more info, mark 44 on Reader Service.

NEW ALKALINE BATTERY

Motorola Inc., Communications Group has introduced their NLN7212A Disposable Alkaline Battery for use with HT/MT Omni FM Two-Way Portable Radios.

Approximately ⅓ the cost of a Mercury battery, this product combines greater user flexibility and "throw-away" convenience with economy in one package.



For additional information about Motorola's Alkaline Battery (Part #60 5460J01), contact Motorola Inc., Communications Group, Public Relations Dept., 1301 E. Algonquin Road, Schaumburg, IL 60196.

PORTABLE POWER SYSTEM

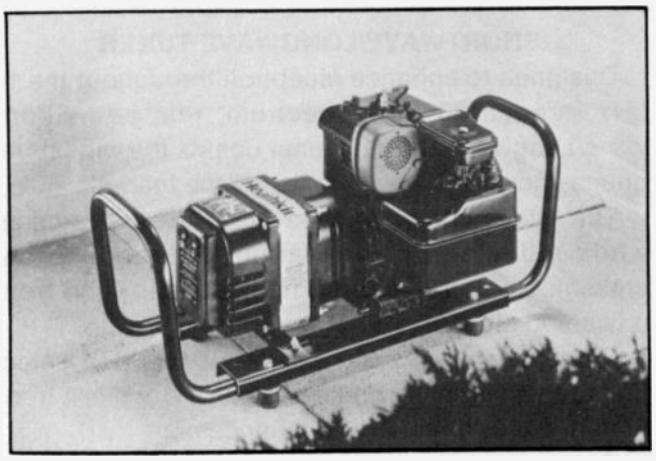
Heath Company announces its entry into the emergency/auxiliary/portable power market with the Heathkit GU-1820 Portable Power System. This lightweight alternator can produce up to 2200 watts of 120 VAC, **60 Hz** power—enough to operate a ham station, an **electric** chain saw or a refrigerator-freezer during a b**lackout**.

The GU-1820 is designed for ham radio clubs, home owners, civil defense, police and fire departments. It can also provide on-location power for construction and logging crews, campers, hunters, wood cutters and others.

The GU-1820 produces more power per pound than comparable generators, according to a Heath spokesperson. The power is available at a built-in duplex 3-prong, 20-amp, circuit breaker-protected outlet.

Voltage is regulated to within ±5%, and frequency variation is limited to ±4 Hz, from no load to full load at 3600 revolutions per minute (rpm). Radio-frequency interference is eliminated by a resistive spark plug.

can run up to 1¾ hours, at half load, on a tankful of regular gas, unleaded gas or gasohol. Noise is controlled by a low-tone muffler; to reduce sparking to a minimum, the optional GUA-1820-1 Spark-Arresting Muffler (required in California) is available.



For more information on the GU-1820 Portable Power System and a full line of over 400 useful electronic kits for home, hobby and car, write for a FREE catalog to: Heath Company, Dept. 350-035, Benton Harbor, MI 49022. (In Canada, write Heath Company, 1480 Dundas Street East, Mississauga, Ontario L4X 2R7.) Or pick up your copy at any of the 64 Heathkit Electronic Centers in the U.S. and Canada, or mark 43 on Reader Service.

ABOUT HAM RADIO

We've been greatly impressed with a new book which tells lots of interesting things about Amateur (ham)Radio and what it has to offer the radio enthusiast. The book is called "Amateur Radio, Super Hobby," and it's by Vince Luciani, K2VJ. This isn't one of those tired old technical mumbo-jumbo epistles such as the League puts out, the kind which scares off five times as many people as it attracts to ham radio, K2VJ's book isn't technical at all. Instead, it's a rather entertaining book which discusses the things you can do as a licensed ham and lets you meet some of the more fascinating folks who you might well bump into on one of the many bands available for ham operation. Lots of really clever cartoons accompany the text. At the end of the book there's a short informal test which lets you know whether you can probably pass half of the Novice Grade exam. This is a great book for anybody who has been kicking around the idea of looking into ham radio but is vaguely put-off or intimidated by most of what has been written about the hobby for pre-ham consumption.

The book's author has been a ham for 35 years and has written in leading radio publications such as *CQ*, *WorldRadio*, and, yes, even *S9* Magazine!

"Amateur Radio, Super Hobby," by Vince Luciani, is available at $8.95 plus $1 shipping/handling, from Cologne Press, P.O. Box 682, Cologne, NJ 08213. It's a large format, 144-page softcover volume. We liked it and we think you will too.

Cardswappers Unlimited

S9's Column for QSL Cardswappers

Conducted By: Dorothy Ferrentino

The Cardswappers Unlimited Column is dedicated to the hobby of swapping or exchanging CB QSL cards (wallpaper). The below listed CB'ers have submitted their names to this column to indicate that they invite other CB'ers to send them QSL cards for swapping purposes, and will respond to all who do so with a QSL of their own. Those readers wishing to swap cards with these people, should mail QSL cards directly to the addresses indicated, and NOT to the offices of CB RADIO/S9.

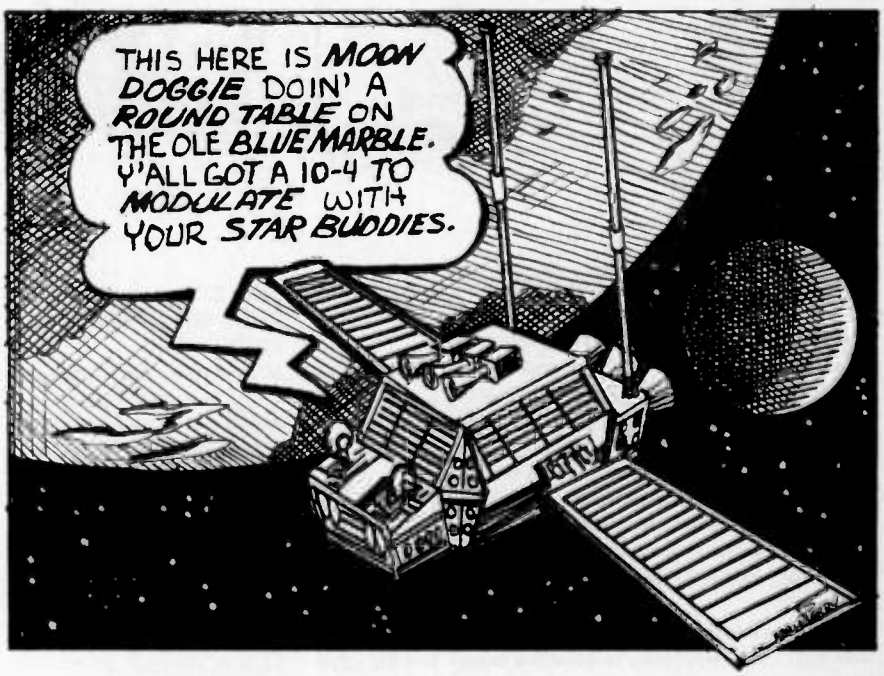
Readers wishing to be listed as Cardswappers are requested to obtain a copy of our rules and standards for becoming a part of this column. These rules were outlined in the December (1979) issue of CB RADIO/S9; a reprint is available for 25 cents and a self-addressed stamped envelope. Address all requests to: Dorothy Ferrentino, Cardswappers Unlimited, CB RADIO/S9, 14 Vanderventer Ave., Port Washington, NY 11050.

Chameleon/ ZSI-295	L.C. Corrin, 165 Visser Street, Peerless Park, Kraaifontein 7570 South Africa
KAST-6919	Mildred S. Bugbee, Rt. 1, Box 39, Pennville, IN 47369
UNIT 776	Jerry Willis, FMC TMC 1 Box 43, APO 09710 NY
KBGD-5575	Patrick Clinch, 22 Division St., Brick Town, NJ 08723
UNIT-451	11632 Las Luces, Santa Ana, CA 92705
UNIT 803	John Jesse, 727 Webster, Mexico, MO 65265
KQL 5845	John J. Vinsko, 34 Weston Place, Shenandoah, PA 17976
UNIT 197L	Mike Zimer, 2917 Coventry Blvd., N.E., Canton, Ohio 44705
UNIT 714	P.O. Box 9266, Phoenix, AZ 85068
KBPL-7464	Walt Hilkemann, 711 E. Bluff, Norfolk, Nebraska 68701
KSC 6872	Cecilia & Wayne Roberson, Box 11014, Parkwater Station, Spokane, Wn. 99211
SSB-9718	Jack B. Richter, 23 E. George St., Yoe, PA 17313
KPM-0221	Hazel Gettinger, 78 Hudsondale St., Weatherly, PA 18255
KPM-0221	78 Hudsondale St., Weatherly, Penna. 18255
Mr. Magic	Harold Martin, 101 Diplomat Plaza, Morton, Illinois 61550
KEY 2443	M. Spranger, Jr., Rt. 1 Perry Lake, Fairview, Mich. 48621
KMV-2120	Jim Thompson, Rt. 6, Box 90A, Ada, Oklahoma 74840
KBDO-4310	Michael Ray, 200 W. Carney Ave., E. Herkimer, N.Y. 13350
KBRE-9298	Claudia Mitchell, Box 2607, Providence, RI 02907
UNIT 124	Dale & Judy Berry, Box 187, Lupton, Mich. 48635
KAEE 2986/ KBBV 1422	Loys & Rosemary Marsh, 4971 Hwy. H, Kewaskum, WI 53040
KRW-9077	Ethel Gomez, 24 Woodland Dr., Wappingers Falls, N.Y. 12590
Mr. Coffee	Michael Ray, 200 W. Carney Ave., E. Herkimer, N.Y. 13350
KACS 1517	Vernon & Reine Ferguson, P.O. Box 183, Henderson, Texas 75652
183/ Big Dollar	United State of Texas QSL Swap Club, Vernon Ferguson, President, P.O. Box 483, Henderson, TX 75652
KAPZ 7857	Jay Ehret, P.O. Box 173, Oaklyn, NJ 08107
KAIF-3799	P.O. Box 509, Gig Harbor, WA 98335
KAOZ-9736	Herman & Mamie Daley, 22 Teetsel St., Saugerties, NY 12477
KES-1734	Walter Cummings, 106 Haskell St., Westbrook, ME 04092
KBLX 6051	P.O. Box 14786, Philadelphia, PA 19134
KBLL 6250	Jerry Willis, FM TMP 1, Box 43, APO 09710, NY
KLF-8464	L.P. Sell, Sr., 9423 Waverly Dr., El Paso, Texas 79924

Tomcat's Mailbag

By S9 Editor Tom Kneitel

Tomcat answers some of his more interesting mail in this column from time to time. Address your letters to Tomcat's Mailbag, S9 Magazine, 14 Vanderventer Ave., Port Washington, N.Y. 11050.



EYE IN THE SKY

Has anybody ever come up with a plan for launching a CB satellite? Seems like a good idea, what with the hams' Oscar series of satellites.

Buddy Bartlett,
Chamberlain, S.D.

Sometime back in the mid-1960's S9 ran a story on how readers could actually construct a mini CB satellite and launch it via helium filled balloon like a radiosonde. Surprisingly (or maybe not so surprisingly) a number of readers actually built the infernal things and launched them with results ranging from astounding to hilarious. Other than that I think the only other CB Oscar I know is "Uncle Oscar" who was a local CB'er when I lived in Modesto, Calif. In 1961. But I think the most exciting thing being done in the field of non-government and non-commerical satellite operations is a proposed earth-orbitting astronomy satellite being developed by the Independent Polytechnic Institute in Troy, N.Y. Founded more than a year ago by an RPI physics graduate, ISRG is supported by membership dues and industry donations and by using off-the-shelf components. They hope to construct the satellite which will send slow-scan television images on an Amateur frequency and which can be picked up throughout the world. The telescope in the satellite will be a 6 footer with an 18-inch diameter mirror; this will be connected to a TV camera, photometers, spectrograph, and other devices operating at all bands between visible light and ultraviolet. The idea is to put this package into a 300-mile high, near polar, circular orbit—having arrived there by grace of being piggybacked on a NASA launch which can accomodate the extra baggage, in a manner to the way Oscars have been placed in orbit. The plan is to first construct a test version, minus the telescope, to be orbited around late 1982 or early '83—this to check out the design, control systems, etc. That should cost about $25,000, even with volunteer labor and off-the-shelf parts. The actual astronomy satellite (and backup spare) should run about $100,000. I think this is a fine and ambitious project and am a member of ISRG. There is a bi-monthly ISRG newsletter available at $5 per year, or it is included with the tax-deductible $10 annual dues, payable to the ISRG, c/o John Ginder, 7 Sunset Terrace, Troy, N.Y. 12180. As spectacular as the Oscar program has been, I think that this project holds far more potential for the general experimenter and it's a real boon to amateur astronomers.

LESS IS MORE

While shopping around for a new scanner I have been starting to take note of the performance specs which seem to describe each of the various sets available. While I am certain that these figures mean a great deal to those who understand them they have little meaning to greenhorns (like me). I have managed to figure out at least some of these specs and the parts they play, but I'm still fuzzy on the specs indicating sensitivity, and exactly how important this is. For instance, if given the sensitivity ratings of 3 different scanners as 1 uV, .5uV, and .12 uV, how do I determine which one is the most sensitive? Am I right in

assuming that the most sensitive one has the best or highest rating (1 uV)? Or is it the lowest (.12 uV)?

Harlan Ellenbogen,
Clinton, Iowa

Your dilemma isn't all that rare, but you'd be right in selecting the scanner with the lowest uV (microvolt) rating, and of the 3 you tossed at me that would be the one with the .12 uV rating not the .5 uV rating. All of us have been programmed to understand that more is better than less, bigger is better than smaller, that a 427 engine is more powerful than a 350, a 500 watt linear is more macho than a 100 watt job, etc. In this case it's just the opposite. You are seeking to determine how sensitive the set is by rating its ability to detect weak signals. The 1 uV rated rig won't detect any signals which are weaker than a full uV in power by the time they arrive at your location, however the set with the .5 uV (½ uV) rating can detect far weaker signals which the 1 uV set can't hear. The scanner with the .12 uV rating, however, can pick up feeble signals which are just a hair more than one-tenth of 1 uV, so it would be the most sensitive of the 3 sets. I don't have the space to get into a lengthy dissertation on decimalized numbers (that is, numbers below "1," the ones with decimal points in front of them), but suffice it to say that you have obviously assumed that because 5 is lower than 12 the set with the .5 uV rating shows a lower number than the one with the .12 uV rating. In working with decimal numbers the .5 uV rating would have to be written as .50 uV (which is the same as .5 uV) in order to give a much clearer and more obvious comparison to the .12 uV rating; you can stick as many zeros as you want after decimal numbers to get them to match up with other similar numbers in respect to the number of digits after the decimal pont and yet you still don't change their values. I would also point out that the sensitivity rating of a scanner becomes more important and critical as you head higher and higher into the frequency bands you'll be monitoring, and even a scanner which displays manufacturer's ratings which compare better then other scanners can often be considerably aided in the sensitivity department by the addition of an RF preamplifier. Also note that sensitivity ratings are often shown in respect to their relationship versus a specific signal-to-noise ratio. This might be written "S/N 12 dB," and since you didn't mention this, I am assuming that each of the thee scanners was rated with the sensitivity figures showing the same S/N figure.

MIXED REACTIONS

Thanks for your fine magazine. I got into 27 MHz about 7 years ago. A friend of mine introduced me to *S9* Magazine and I never miss an issue. I find that your honesty and straightforward up-front thinking and speaking out are very heartwarming in a world of backbiting and general dishonesty.

Michael E. Sabinas, CM1, USNR,
Naval & Marine Corps
Reserve Center,
South Bend, Ind.

I only started reading *S9* a few months ago but I had to write to tell you how impressed I am with it. The February Sideband issue was so good that it made me go out and buy a Sideband rig!

Paul Hebel,
Peru, Ill.

Tomcat's Mailbag column should be taken more seriously by the Editor than it is presently. People who have written have been met by uninformative and sometimes needless responses. In November, you told a Mr. Reistmueller of Milwaukee to take valium, and to tell his friend with the "ugly QSL to take some valium too!" Your remarks amplify the amateurish way in which this magazine is presented. I'm sure radio enthusiasts who are subjected to your remarks would rather read about their hobby. I doubt if I will renew my subscription.

William R. Wise, Jr.
Fishkill, N.Y.

Ho boy, I'm in the dog house again with another reader! Guess I can't win 'em all. The answer is that S9 doesn't seek to be all things to all people. As an observer/reviewer writing an assessment of the CB phenomenon for a university study once noted, "S9 Magazine is definitely an acquired taste. Either its readers learn that taste and then enthusiastically remain fiercely loyal to the magazine for years, or they can't figure out how to acquire it and hastily depart with either annoyance or outright rage."

When S9 started in 1962 we decided that we wanted to be able to express

our opinions as well or as poorly as the next guy; also that uninformative and needless letters sent here would probably stand a 95% chance of generating an uninformative and needless response. The guy who was told to take valium was lucky I didn't tell him to take Ex-Lax along with his umbrage. His pal's QSL card was downright ugly and we were as entitled to think so as much as he and his friend thought it was attractive. Fact is that not long after S9 ran that letter in the November issue, Mr. Reistmueller wrote again to say that while he declined to use valium, he did partake in a few cans of Schlitz, and it helped him to evaluate his friend's QSL "in a totally new perspective, which helped me to realize that the damned thing really is an ugly little beast, just like you said it was. But my friend is still the greatest guy in the world." See, you've got to be tuned in on S9's frequency to know what we're all about! Oh well, are you ordering the standard 1-year nonrenewal, sir, or are you cancelling for life?

THE INNS ARE OUTS!

Here's a hint for getting the most out of your vacation this year—rely upon your CB rig more than ever before as it can save you on the big bucks it costs to top off the car's fuel tank. Don't hesitate to ask via CB for any road directions and shortcuts you can use to lessen driving distances, and radio ahead on the Interstates to ask if there are any detours, traffic accidents, or tieups; this is especially necessary if you happen to be approaching major cities during the morning or afternoon rush hours. You can even use your CB to ask other drivers if they can direct you to gas stations offering the lowest price per gallon in the area. I have found that these practices saved money and time last year; this year I'm sure that the savings will be even better. I'm hoping that other *S9* people will come forward to offer additional suggestions for better vacations. What's your favorite "vacation improver" suggestion, Tomcat?

Ernie Vavoudis,
THE OLYMPIC FLASH
Beaver Falls, PA

Ernie, I endorse all of your suggestions and can immediately offer only one additional rule which I have found has added considerably to the pleasure and economy of my more recent ventures forth into "vacational America." For my own personal addition to vacation improvement ideas, avoid Holiday Inns!

DOWN WITH MODULATION

In the several years I've been involved with CB radio I've heard the term "downward modulation" tossed around hundreds of times. Yet every time I've asked for an explanation of what "downward modulation" is, and what's bad about it, I get a different answer or some vague cop-out. What (if anything) is "downward modulation"? And what's all the fuss about—if anything? Would a power mike cure it?

THE AARDVARK,
(Chip Sanderson)
Mt. Ida, Ark.

The kind of modulation we use varies the strength of the transmitted signal. If we happen to be testing with a sine-wave tone and modulate 100%, the transmitter output will be varying from zero up to four times its unmodulated power level as the modulating signal passes through its cycle. This is the way things are when everything's hunky-dory. If something's wrong, however, the output won't swing above the unmodulated level at all—it will swing down without any problem, but it won't swing upwards. A number of things can cause this sympton, including something screwed up in the rig's oscillator circuitry or the transmitter's RF section, or a misadjustment of a tuned circuit in the transmitter. Regardless of the cause, the sympton itself is known as "downward modulation," and I can assure you that it is very real, indeed, even though the term does seem to be tossed around by many folks who don't quite know what it is. If you're checking output with a field strength meter, it shows up as a drop of meter reading when you speak—in a normal situation, the meter should deflect upwards as you speak. Anybody who finds that their equipment is having this problem should run (don't walk) to the nearest service technician. The results of downward modulation could be splattering your modulation products all over adjacent frequencies. Even a power mike can't help this scuzzy situation.

HELLO SKIPLAND!

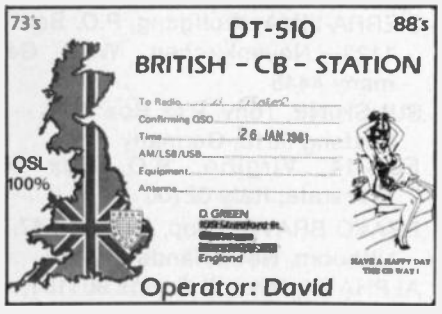
By Craig, VX-42/Unit 342-X-ray/SSB-7042

Readers of this column are requested to let us know any overseas addresses they come across or hear on the air. We would also like to receive copies of any DX cards received by our readers so we can run them in the Hello Skipland Column. Since we don't wish to be responsible for the "safety" of any rare DX QSL's we request that readers send in copies (Xeroxes or other office type copying machine prints are fine) and not the original cards.

SPECIAL REPORT ON CB IN ENGLAND

It does appear as if the CB "legality" question is about to be settled inasmuch as the British government has finally relented from its previously adamant stand against CB and is expected to "introduce" CB in England some time by late summer or early autumn.

Home Secretary William Whitelaw told Parliament that the service would be authorized on 27 MHz, but with FM (Frequency Modulation). He also said that additional frequency space would be available at about 930 MHz. Users would be able to purchase licenses although no fee was announced.



Mr. Whitelaw observed that somewhere between 60,000 and a quarter of a million present illegal operators using American AM-type equipments would remain illegal because their equipment could not be licensed under the proposed FM standards, citing almost 5,000 interference complaints which he blamed on this equipment.

At this point, it's really difficult to assess the potential impact of this latest move by the British government in its long running battle with the growing number of CB'ers in England. Somewhere along the line it does seem to this observer that the British government became disconnected from the ability to see where CB was heading and how it was growing. Certainly the proposed establishment of an FM CB service in a world where CB has traditionally meant AM and its cousin SSB looks as if were yet one more manifestation that these Home Office people may be going out in the noon day sun a bit more often than is expected or required of them.

One might ask how there could be so many illegal operators in England, lest there be no laws against smuggling in that nation. Most sets enter via Eire, where their importation is barely controlled, then they move across the border into Northern Ireland, and from there straight to the "mainland" United Kingdom. Once in England the equipment sells for only about a 20% premium over its American price. It does seem that the equipment is plentiful on the market and anybody who wants a set has no difficulty in buying one. There are dealers operating from the backs of their cars, and some have suggested that at least a few of the shops selling CB accessories can figure out how to obtain a transceiver for an interested customer.

CB clubs are quite active in most areas of England these days. There are several monthly magazines, and the operators have made countless friends throughout the world. Many people operate only from their mobile units, feeling that a large base station antenna would bring unwanted attention from the "Fuzzboys." These are Post Office investigators, similar to what American operators have come to know as FCC Field Monitoring Enforcement Personnel. Police officers can also hassle CB'ers in England, as they also have the power to enforce the Wireless Telegraphy Act (WTA). In actual practice, these days the police seem to take a rather ambivalent (if not altogether indifferent) attitude to CB'ers breaking the WTA, despite adamant demands from the Home Office that they take action in instances of illegal transmissions.

The popular view is that WTA offenses require too much special backup and knowledge for police to bother with on their own. Unless a person is willing to admit outright guilt, the help of a Fuzzboy is required—and the entire nation has only 350 of these people and they are required to oversee everything that has to do with the radio spectrum; that includes investigating interference complaints from arc welders, checking out commercial radio communications users, and everything else, including catching people for not having licenses to own their TV receivers (yes, you need a license to harbor a TV set in England). The Fuzzboys are hard pressed to try to catch CB'ers, and police

have actually had more success in enlisting the aid of Customs and Excise Officials who can make a bust on the basis of illegal importation of the equipment.

While some CB'ers have been caught, stories of how police turn a blind eye to illegal CB operation are too numerous and detailed to be totally made-up. Some have said that the police often wish CB'ers well and send them on their way. Others report that many members of the Police are themselves active operators!

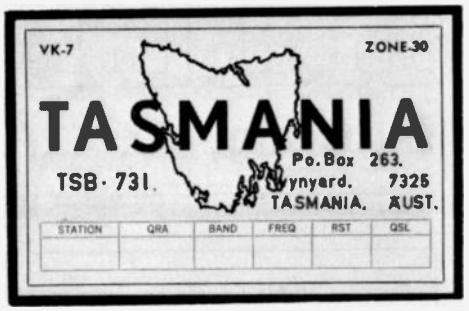
Although the possibilities of 900 MHz CB had been tossed around by the Home Office for quite some time now, and it looks as if they are determined to add it to their new 27 MHz CB FM band, most operators seem clearly to detest the idea. They cite price considerations, limited transmitting range, and possible health risks as making 900 MHz extremely unappealing.

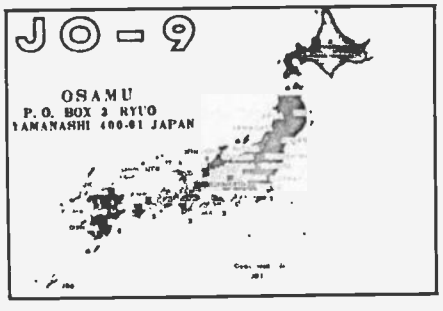
CB in England has come a long way from its fateful starting point some 4 years ago when the record "Convoy" began the people's fascination with the small transceivers. Most people look back and say that if the government had allocated some usable frequency for CB at that time they might have been able to control the situation. Instead they gave the idea a flat *no* and got many people mighty annoyed—it made not the slightest dent in the undeniable success of British CB, albeit illegal.

The first crack in the Home Office's implacable attitude towards CB seemed to come when they recently announced the availability of 35 MHz for radio controlled model aircraft; such operations had previously been authorized on 27 MHz. CB'ers saw this as the omen that the decks on 27 MHz were being cleared off for the legalizing of CB radio there, although the announcement that the service was to be established using FM took some of the glitter away from the idea.

The way the script appears to be working out for CB'ers throughout the world these days is that having a governmental agency shaking a wary finger at us and claiming that we're doing something illegal is past absurdity. Most operators see the rules and regulations they are using to say we are illegal to be silly rules; unnecessary, and arbitrary. Common sense analysis of the situation does not cause one to see that this *supposed* "illegality" has caused anybody any harm or has done anything other than bring relaxation, friendship, and enjoyment to many people. Because of these factors, the sense of shame or guilty conscience which is usually associated with being accused of being "guilty of doing something illegal" seems to be strangely absent from the minds of CB'ers throughout the world when it comes to their hobby—and this is an international phenomenon.

In England, it does seem that such a stigma has not in any way held back the spectacular growth of CB. One can but wonder then, at this point, if the prospect of becoming "legalized" will be sufficient motivation for anywhere from 60,000 to 250,000 illegal operators to scrap their equipment, change their operating styles and habits, and start from scratch with a transmission mode which is decidedly inferior to SSB, and possibly even straight AM. On the face of it we would say that the odds are that if the Home Office thought that it had a tiger by the tail with 60 to 250 thousand illegals, they're going to be a lot less happy when they see what happens as newly licensed FM stations attempt to legally use the 27 MHz frequencies and are met by a howling horde of outraged AM and SSB operators who have been operating there for years!





OVERSEAS ADDRESSES

(A shortie list this month because of our lengthy special report on CB in England! But these are extra-good ones. More listings next issue!)

SSB-0108, John Picart, Roterlaan 16, 3721 Kortessem, Belgium
SSB-0107, H. Waldo Molemans, Opeinde 43, 3720 Kortessem, Belgium
JO-9, Osamu, P.O. Box 3, Ryuo, Yamanashi 400-01, Japan
95-AT-264, Oleg Abramov, Poste Restante, Ulan Bator 49, Mongolia Asia
SSB-0141, Rene Berchem, 59 Rue de Sanem, L-4485 Soleuvre, Luxemburg
ARP-692, Elias, Box 1246, Guyaquil, Ecuador
50-AT-380, Boris Chuistof, P.O. Box 20, Yalta, Crimea, USSR
HUA-3357, Joaquin Duran, P.O. Box 12, Santa Ana, El Salvador, C.A.
SSB-0369, Leew van Zanen, P.O. Box 43309, The Hague 2504-AH, Netherlands
INDIA TANGO, Charly, Box 1174, Athens, Greece
ARP-911, Gustavo, Box 3713, San Jose, Costa Rica, C.A.
Jose, PSC 1, Box 4029, APO San Francisco 96366 (Jose is in Korea)
SIERRA LIMA, Wolfgang, P.O. Box 1123, Neuenkirchen, West Germany 4445
SUNSHINE, Tony, P.O. Box 1172, Grafeng 8018, Germany
ECA-14, Virgilio, P.O. Box 16, Macerata, Italy 62100
BRAVO BRAVO, Joop, P.O. Box 47, Uithoorn, Netherlands 1420AA
ALPHA 64, Mike, P.O. Box 901151, Hanav 6450, West Germany
ALFA BRAVO 1, Bruno Dammert, P.O. Box 1, 7521 Kronau, West Germany
DES CHOMSE, Box 338, Gatooma, Zimbabwe
UNIT 075, John, P.O. Box 162, Terneuzen 4350 AD, Netherlands
ARP-256, Filippo, Box 219, S. Crus de la Palma, Canary Islands
ARP-419, Angel, Box 11139, Lima 14, Peru
STATION BALTIMORE, Herman, P.O. Box 100, Opwyk, Belgium 1890

WASHINGTON OUTLOOK

WHAT'S HAPPENING AT UNCLE CHARLIES'

FCC "JUDGE" DOESN'T KNOW THE DIFFERENCE BETWEEN HAM & CB EQUIPMENT!

Chief FCC Administrative Law Judge Lenore G. Ehrig, in an initial decision, has revoked the license of David A. Langham of Rowland Heights, Calif., for CB station KRU-9343 and denied his applications for Amateur radio station and Novice Class Operator licenses.

"Langham had been operating his CB radio on frequencies reserved for U.S. government use," said the FCC.

As a result of an FCC investigaton, Langham was notified he was in apparent violation of the rules and a hearing was set to determine, among other things, whether he had operated on the unauthorized frequencies and whether he was a member of the "U.F. International Club," a group that, the FCC contends, encourages "operating CB radios on unauthorized frequencies."

Judge Ehrig found that Langham's transmissions on July 10, 11 and 12, 1979, as well as on January 30 and February 6, 1980, constituted wilful and repeated violations of the Communications Act since he "operated on unauthorized frequencies, failed to identify by his assigned call sign and operated his *CB radio* using *Amateur-type equipment* for which he had no authorization." (Unquote the FCC.)

She also determined that at least since 1977 Langham had been a member of the "U.F. International Club" whose stated purpose, reports the FCC, has been "to operate on unauthorized frequencies."

Judge Ehrig found that Langham lacked the qualifications to be a Commission licensee because he was lacking in candor and made deliberate misrepresentations to the Commission in the course of the FCC's investigation of his "CB operation."

She concluded that, as a result of Langham's behavior, his CB license should be revoked and the public interest would not be served by granting his applications to operate in the Amateur service.

It was, however, most unfortunate that inasmuch as Langham was described as "using Amateur-type equipment" and was not found operating on any CB frequency, that "Judge" Ehrig continually referred to his operations as "CB operations" and his station as consisting of a "CB radio." One can but continue to wonder if these so-called FCC "judges" even know (or care) what they are talking about. It would seem that, if anything, Langham should have been better described as operating an unlicensed Amateur station since he was not charged with any misuse of CB frequencies or equipment.

FCC REVOKES CB LICENSES

The FCC revoked some Citizen Band station licenses for violating the following rules:

1. Overpower (CB Rule 20)
2. Unauthorized frequency (CB Rule 17)
3. Use of linear amplifier (CB Rule 21)
4. Use of equipments that is not type accepted (CB Rule 19)
5. Use of modified equipment (CB Rule 41)
6. Misuse of Channel 9 (CB Rule 17)
7. Failure to allow inspection (CB Rule 43)

Following is a list of those individuals whose licenses were recently revoked:

Rogers Lee, Mansfield, LA, KAAN-0797
Michael C. Lee, Irving, TX, KKU-4398
Merle O. Stare, Anaheim, CA, KAAH-1557
Mary J. Trocasso, Corona Del Mar, CA, KBMK-3129
Lawrence B. Parker, Hunt. Beach, CA, KAEJ-5207
Terryl S. Peterson, San Jose, CA, KOD-8321
Kenneth S. Havlick, Harwood Hts., IL, KBBS-9192
Judith A. Murray, Kalamazoo, MI, KADR-7102
Jack M. Lewis, E. Providence, RI, KMB-6962
Laverne Webster, Hales Corner, WI, KQL-7386
Robert G. Lund, Whittier, CA, KBIL-8772
John G. Griffin, Chicago Hts., IL, KASW-9554
Darnell Simpkins, Jamaica, NY, KBKC-8785
William L. Butler, Santa Ana, CA, KDF-6391
Charles W. Watson, Dayton, OH, KDE-4188
Roger D. Hartwig, Glendale, AZ KIA-9297
Timothy B. Mason, Phoenix, AZ, KBEI-9158
Ray Patterson, Hope, AK, KAAC-9608
Thelma W. Sprankle, Bakersfield, CA, KBGN-9657
George Jackson, Compton, CA, KBEI-6253
Fred M. Hernandez, El Monte, CA, KBLV-0498
Richard L. Warner, Jr., Whittier, CA, KADC-5043
Russel Mendenhall, Thorton, CA, KGE-1142
Edith M. Frymyer, Apopka, FL, KMD-2657
Dale E. Menard, Pensacola, FL, KBHW-4515
Ernest Trimble, Atlanta, GA, KBFF-0701
Gayle Borg, Chicago, IL, KBKS-1819
James W. Russell, Chicago, IL, KAVX-5638
Ralph E. Bailey, Boston, MA, KBMZ-5445
Joseph E. Alaimo, Springfield, MA, KAXT-5237
Lloyd R. Mead, Shelton, NE, KADK-8243
William C. Ogden, Albuquerque, NM, KBKW-3282
Wallace L. Herron, Winston-Salem, NC, KBHE-8426
Cary F. Foropoulos, Memphis, TN, KAIR-0709
David A. Harris, Houston, TX, KBNA-5642
Donald H. Nack, Wauwatosa, WI, KNV-1830

Bernard C. Brown, San Jose, CA, KBET-3629
Elder Bryant, Jr., W. Hollywood, FL, KAII-7810
Terry L. West, Philadelphia, PA, KAVE-0183
Edward L. Vehmeyer, Garden Grove, CA, KBKY-7497

FCC ENCOURAGES EXPERIMENTATION

Consistent with a recent Commission amateur radio definition that, "The Amateur Radio Service is for technically-inclinded persons who wish to learn about and experiment with radio communications equipment and operating techniques" (Commission Order of November 6, 1980), interested radio amateurs are encouraged to experiment with new methods of transmission and new radio technologies.

The Commission realizes that in certain instances proposed experiments may conflict with existing rules, and may therefore require a Commission rule waiver. The Commission is willing to grant rule waivers for many different experimental purposes, including:

Spread - spectrum modulation techniques
Packet - switching networks
Radioteleprinter codes, other than ASCII and Baudot
"Beacons" for propagation studies
Medium-scan television
Frequency and/or amplitude "compandoring"
Digitized voice techniques
Digitized video techniques
"Trunked" repeater systems
EME communications

For example, on March 6, 1981, the Private Radio Bureau granted Special Temporary Authority (STA) to 25 radio amateurs affiliated with the Amateur Radio Research and Development Corporation (AMRAD) to experiment with spread-spectrum transmission. (Spread-spectrum is an application of broad band transmission that appears to make more efficient use of congested frequency bands than does conventional narrow band transmission.) On August 15, 1980, an STA was granted for two years to a radio amateur to conduct experiments in digital phase shift keying in the high frequency (HF) phone band, where slow-scan television is authorized. During November, 1980, four amateur licensees were granted a rule waiver to permit transmissions of the digital teleprinter code for the purpose of conducting experiments to develop an error-free mode of amateur teleprinter communications. These recent examples represent only a small segment of the many avenues of experimentation open to licensees in the Amateur Radio Service.

Licensees wishing to conduct experiments within the amateur bands should first refer to the Commission's rules to determine if a Commission rule waiver is required. If the experiment may be conducted in accordance with the rules, no communication with the Commission is required. However, if a proposed experiment will conflict with any of the Commission's rules, the licensee conducting the experiment must write to the Commission requesting a waiver of the specific rule(s). Waiver request letters should be addressed to:

Federal Communications Commission
334 York Street
Gettysburg, Pennsylvania 17325
Attention: Technical Section

The content of the waiver request letter should never cover complete details of the proposed experiment, including all technical parameters, specific frequencies to be used, and a justification for the project. The Commission will approve or deny your request in writing, and no experimentation may commence until the written approval is received.

FINED FOR JAMMING AMATEUR REPEATER

Uncle Charlie fined Donald L. Rhoads of San Francisco $750 for deliberately interfering with the operation of an Amateur radio two-meter repeater station located on nearby Grizzly Peak.

An Amateur repeater station, usually installed at a high elevation, is designed to receive weak signals from low power Amateur station and rebroadcast them over a wide area.

Rhoads, whose station was unlicensed, falsely identified it by using a call sign belonging to a licensed Amateur radio operator, transmitted obscene, indecent, and profane language, as well as music and party records, which jammed the repeater and prevented its use by authorized Amateur radio operators.

Engineers from the Commission's San Francisco District Office, using sophisticated direction finding equipment, traced the jamming signal to Rhoads' apartment and closed the station down.

UNLICENSED STATION OPERATORS PAY FINES

The FCC Field Operations Bureau has announced that Rodney M. Gray, Whittier, Ca., submitted full payment of a $750 fine for violation of Section 301 of the Communications Act of 1934, as amended.

The violation resulted from unlicensed radio operation on a U.S. Government frequency.

The FCC Field Operations Bureau has announced that Charles V. Harris, Jr., Huntington Beach, Ca., submitted full payment of a reduced $500 fine for violation of Section 301 of the Communications Act of 1934, as amended.

The violation resulted from repeated unlicensed operation of a radio station on a frequency assigned for exclusive U.S. Government use.

coming events

AUGUST

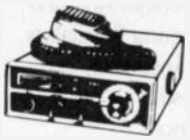
Ventura, California. 5th Benefit Jamboree for Retarded Children Fund, Ventura County Fairgrounds, August 21, 22, 23. Cash prizes, radios and equipment, guest M.C.'s, camping and bingo. For more information write to Jamboree Committee, P.O. Box 878, Port Hueneme, California 93401.

Blackstone, MA. 3rd Annual Coffee Break, Sunday, August 23 from 10 a.m. to 5 p.m. at the Ice House Club on Carter Avenue. Cash prizes and awards given. Open to the public with $2.00 advance tickets and $2.50 tickets at the door. For information contact Harold Sherman, 79 Dewey Street, Woonsocket, R.I. 02895, or phone (401) 766-5177.

SEPTEMBER

Bowling Green, Kentucky. Mid-America March of Dimes Jamboree, September 19-20. Sponsored by the Bowling Green-Warren County C.B. Radio Club, Inc. For more information write the club at P.O. Box 376, Bowling Green, Kentucky 42101, or call (512) 843-8911.

CB SHOP



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2. **Display Ads**
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Closing Date—All advertising in this section will now close the 10th of the third preceding month; i.e., January 10th for the April issue.

PAYMENT – All ads must be pre-paid by check or money order (payable to Cowan Publishing Corp.), or through Bank Americard (Visa) or MasterCharge. On charge orders, include card number, expiration date and interbank number.
Permanent address and phone number must be supplied if not identified in actual ad copy. Publisher reserves the right to refuse any advertising deemed unsuitable or inappropriate. Because advertisers, services, and equipment contained in CB Shop have not been investigated, the publisher cannot vouch for the merchandise or services listed therein.
Direct all orders and correspondence to:
Eileen Lucey, S9/Hobby Radio, 14 Vanderventer Avenue, Port Washington, N.Y. 11050.
Phone: (516) 883-6200.

GET MORE CB CHANNELS AND RANGE! Frequency Expanders, boosters, speech processors, VOX, AM/SSB bleedover filters, do-it-yourself repairs, plans, modifications. Catalog $2. CB CITY, Box 31500-S, Phoenix, AZ 85046.

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MONITOR FOR EMERGENCIES ON CHANNEL 9 or your local truckers' channel. We invite you to join our nationwide, non-profit organization. Members receive all the information they need to be an effective monitor. NO meetings and NO required monitoring. Members identify with their state name (such as "Florida State Emergency Radio") using the team call letters. INDIVIDUAL and TEAM membership. For more information and a membership application, send a self-addressed, STAMPED envelope (stamp REQUIRED for a reply) to: U.S. EARS, Headquarters, P.O. Box 1956-A, San Jose, CA 95109.

100 WATT MOBILE LINEARS, inexpensively built. Step by step picture method. You receive a fully etched printed circuit board and complete instructions. Just solder parts on. $19.95. Parts catalog available, SASE for further details. Matco Electronics, Box 316A, Cadillac, MI 49601.

SCANNER CRYSTALS! America's leading mail order specialist, sent to you postpaid and factory fresh! Lowest prices anywhere, so low we can't even print them here! Send postage stamp for free catalog and special order form! Z-Tech, P.O. Box 70, Hauppauge, NY 11788.

BROWNING RADIOS: Send $1.00 and self-addressed stamped envelope to Browning Collector, P.O. Box 468, Pittsfield, MA 01202, for price list and photograph of collection and radios for sale. R27-S23, Golden Eagle, Mark II (5 pcs.), Mark III (5 pcs.), Mark IV and IVA. Mobiles-Brownie, SST, Sabre, Baron and Browning Drake (1962). Mark III 180 Amplifier, Browning Plaques and Gold Banner. For price only send self-addressed stamped envelope. This is my hobby, not business. I buy, sell and trade to help people get Browning Radios they are looking for. Also prices and radios available change.

THE BOOTLEGGERS BIBLE - Your letters show it's the finest publication for *Modifying the CB Radio*, above Ch 40 or below Ch 1, 77 PLL Chips included, AM & SSB, 23 & 40 Ch sets. 88 pages. $12.95
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SIDEBANDERS! Old Timers, newcomers, future operators! Do you care what happens to Sideband? We do too! Let's insure that we all get the very most out of Sidebanding, now and in the future! Add your vote to an even better, more useful, and more exciting Sideband by affiliating with the world's oldest (1964), largest and most important all-Sideband group. Your free application is waiting for you—get your own permanent national "SSB" ID numbers NOW to let the world know that you've got a stake in Sidebanding's present and future! Let's save Sideband! For application (no obligation) send a self-addressed, stamped, No. 10 long envelope. If you enclose your QSL, we'll return one of our spectacular metallic "silver" QSL's in return! SSB NETWORK, P.O. Box 908-X, Smithtown, NY 11787.

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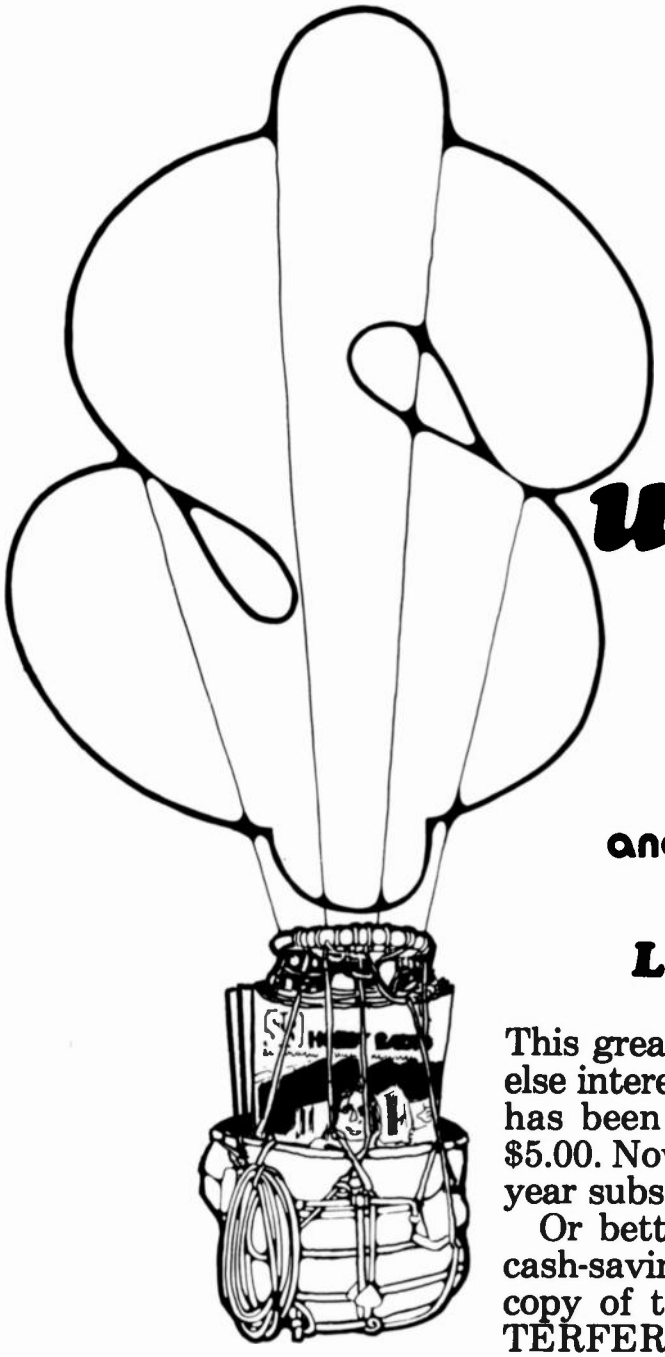

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CB TIMES: "... it's not often that a product bursts onto the market scene, dominates and improves CB'ing for everyone. American Antenna and the K40 are doing it—repeated tests showed the K40 could out-perform the major competitive brands."

RADIO ELECTRONICS: "The results of our tests showed that, In three different positions of the monitoring receiver, the *model K40* equaled or out-performed the competitive antenna. Apparently, American Antenna's advertising is not merely Madison Avenue showmanship."

PERSONAL COMMUNICATIONS: "... an impressive 95% of the trials, the K40 out-performed the existing mobile antennas. We had to try one for ourselves.

"... in every case, the K40 either equaled or out-performed its competitor.

"No ifs, ands, or buts! The K40 Antenna from American Antenna would have to be just about the best antenna around.

CB MAGAZINE: "Introduced in October, 1977, the K40 quickly became the top seller and in mid 1978, became the number one selling antenna in the nation."

...Here's what CB'ers all across the country said.

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—J.H. Collett, 207 McFee, Bastrop, LA

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—H.R. Castro, VRB, Monserrante D-67, Salinas, Puerto Rico

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—John A. Blum, Box 446, Zelienople, PA

SHAKESPEARE: "... I've been a CB'er for three years and the K40 is the best I've ever had. Better in reception and transmission than my Shakespeare."
—H. Bachert, Jr., 15 King Rd., Park Ridge, NJ

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